

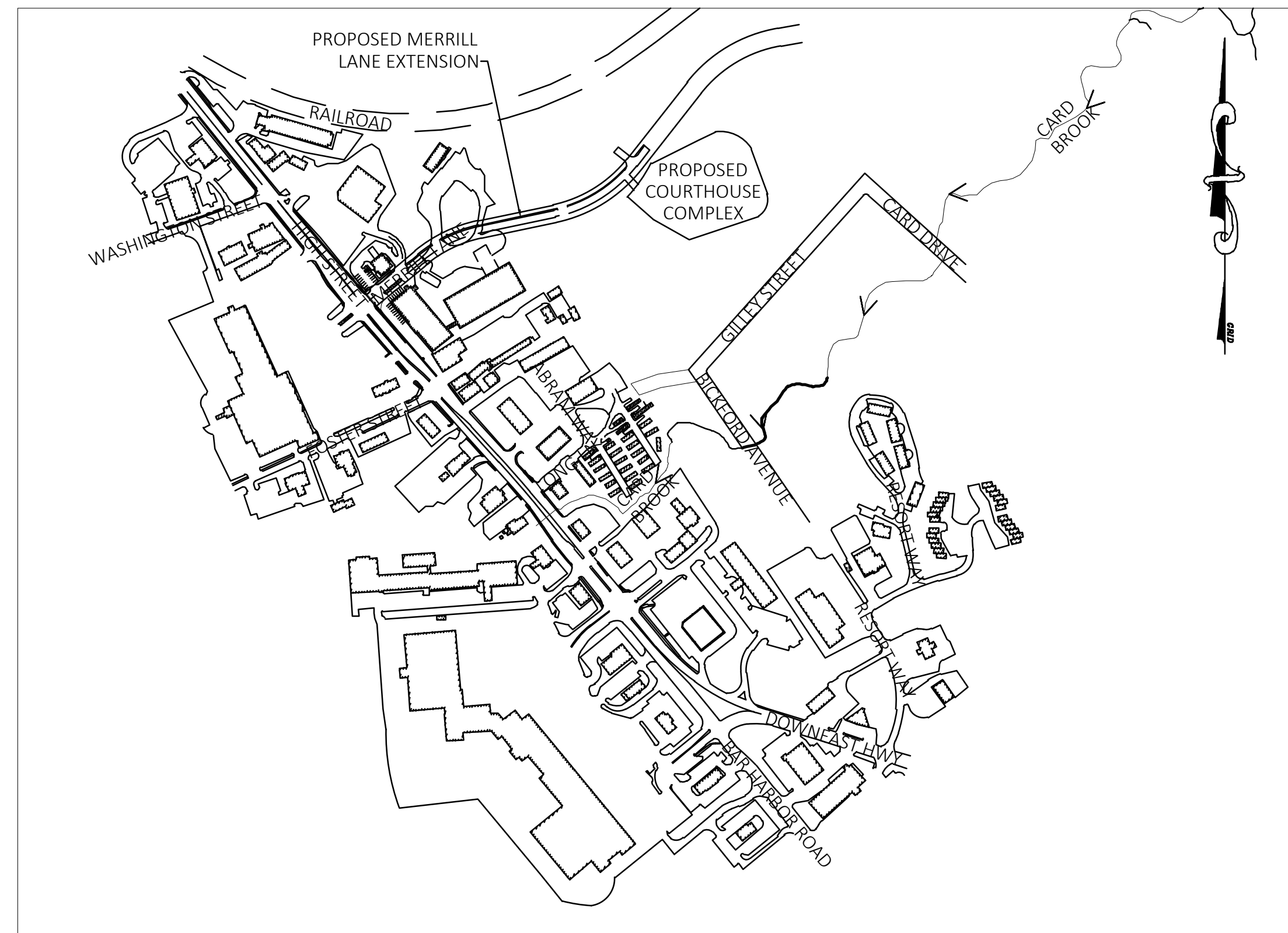
MERRILL LANE EXTENSION

LIST OF SHEETS

COVER

- C1.0 VICINITY PLAN
- C1.1 EXISTING WATER SHED PLAN
- C1.2 DEVELOPED WATER SHED PLAN
- C1.3 WETLAND IMPACT PLAN
- C1.4 USF 1 & 2 PLAN & DETAIL
- C1.5 USF 3 & 4 PLAN & DETAIL
- C1.6 USF 5 & 6 PLAN & DETAIL
- C1.7 USF 7 & 8 PLAN & DETAIL
- C1.8 USF 9 PLAN & DETAIL
- C1.9 GRADING PLAN
- C1.10 CENTERLINE PROFILE
- C1.11 BURIED UTILITY PLAN
- C1.12 UTILITY PROFILE
- C1.13 SECTIONS 0+00 TO 2+75
- C1.14 SECTIONS 3+00 TO 6+50
- C1.15 SECTIONS 6+75 TO 9+75
- C1.16 SECTIONS 10+00 TO 12+25
- C1.17 TURN AROUND SECTIONS
- C1.18 CONSTRUCTION NOTES
- C1.19 EROSION CONTROL DETAILS
- C1.20 ROAD CONSTRUCTION DETAILS
- C1.21 UTILITY CONSTRUCTION DETAILS
- C1.22 USF CONSTRUCTION DETAILS

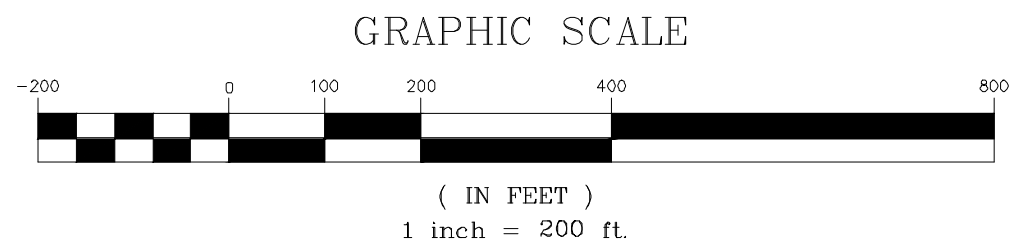
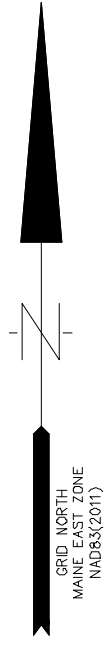
PROJECT LOCATION



ANDREW McCULLOUGH
ENGINEERING CONSULTANTS
93 BUCKSPORT ROAD
ELLSWORTH, ME 04605
207-667-6551 mccengr@gmail.com

CITY OF ELLSWORTH
ONE CITY HALL PLAZA
ELLSWORTH, ME 04605

OCTOBER 30, 2025



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

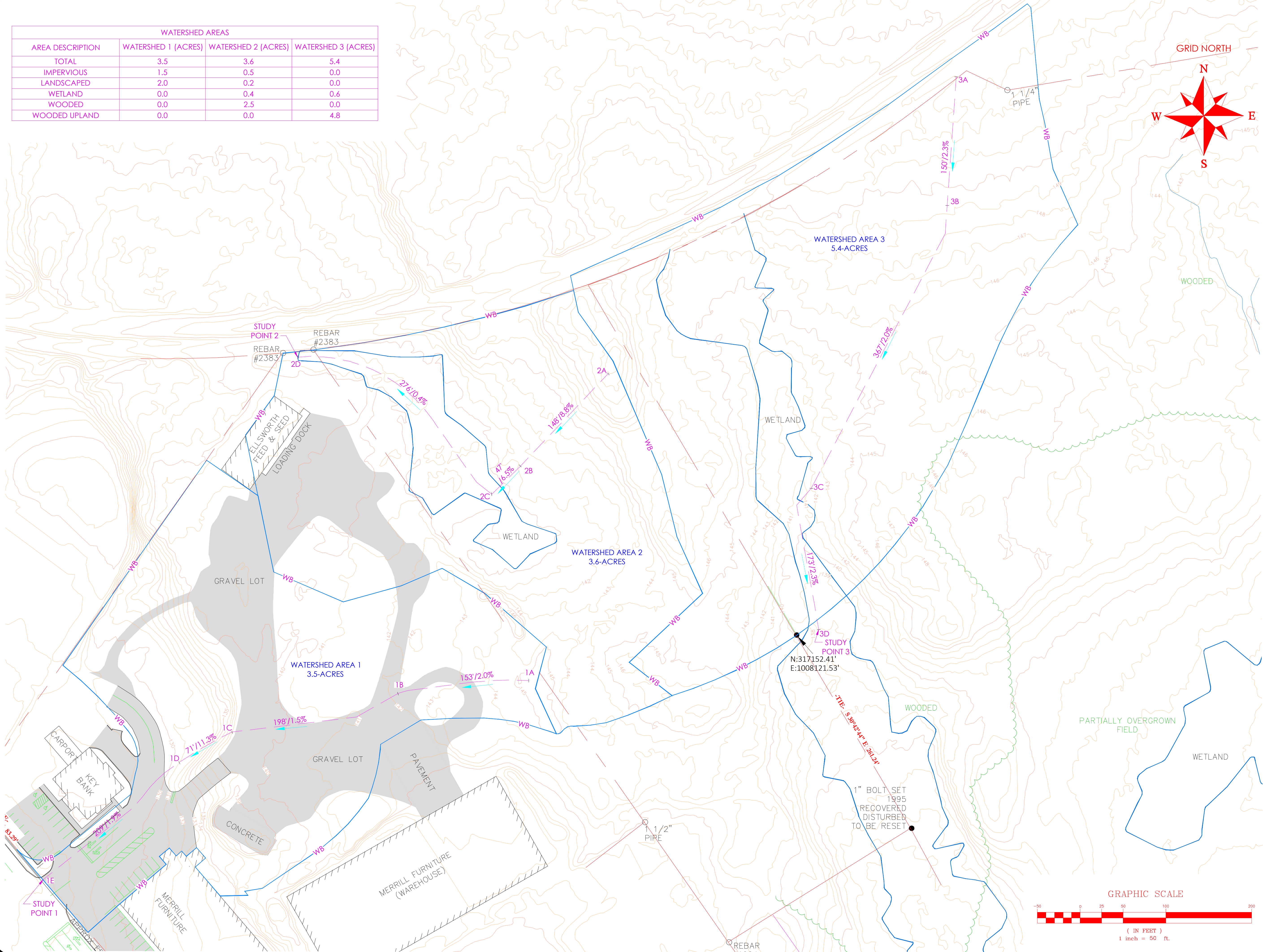
Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
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mccengr@gmail.com

Project Name and Address
VICINITY PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
Merrill Lane
Ellsworth, Maine

Project	Sheet
6508	C-1.0
Date 10/30/25	
Scale 1"=200'	

WATERSHED AREAS			
AREA DESCRIPTION	WATERSHED 1 (ACRES)	WATERSHED 2 (ACRES)	WATERSHED 3 (ACRES)
TOTAL	3.5	3.6	5.4
IMPERVIOUS	1.5	0.5	0.0
LANDSCAPED	2.0	0.2	0.0
WETLAND	0.0	0.4	0.6
WOODED	0.0	2.5	0.0
WOODED UPLAND	0.0	0.0	4.8



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

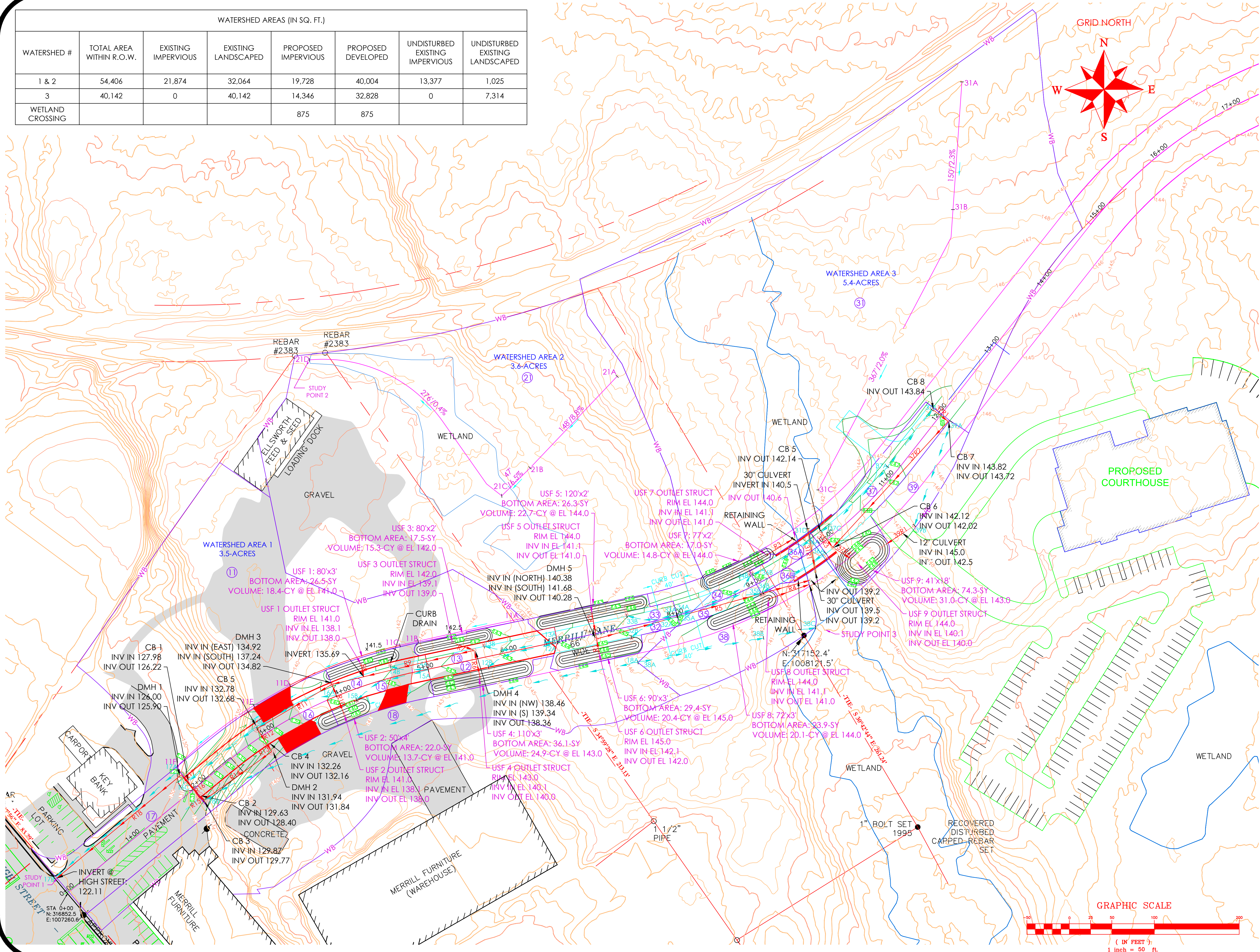
Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
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EXISTING WATERSHED PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.1
Date 10/30/25	
Scale 1"=50'	

WATERSHED AREAS (IN SQ. FT.)							
WATERSHED #	TOTAL AREA WITHIN R.O.W.	EXISTING IMPERVIOUS	EXISTING LANDSCAPED	PROPOSED IMPERVIOUS	PROPOSED DEVELOPED	UNDISTURBED EXISTING IMPERVIOUS	UNDISTURBED EXISTING LANDSCAPED
1 & 2	54,406	21,874	32,064	19,728	40,004	13,377	1,025
3	40,142	0	40,142	14,346	32,828	0	7,314
WETLAND CROSSING				875	875		



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

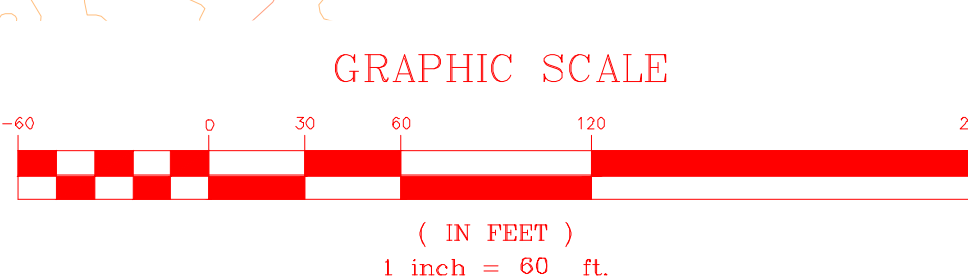
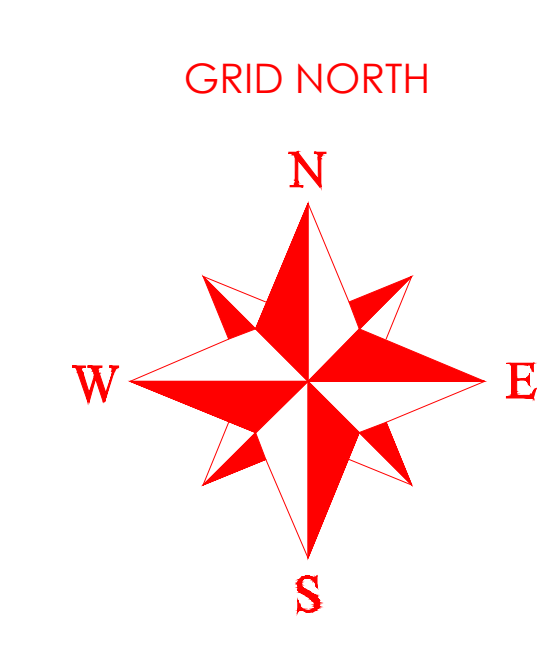
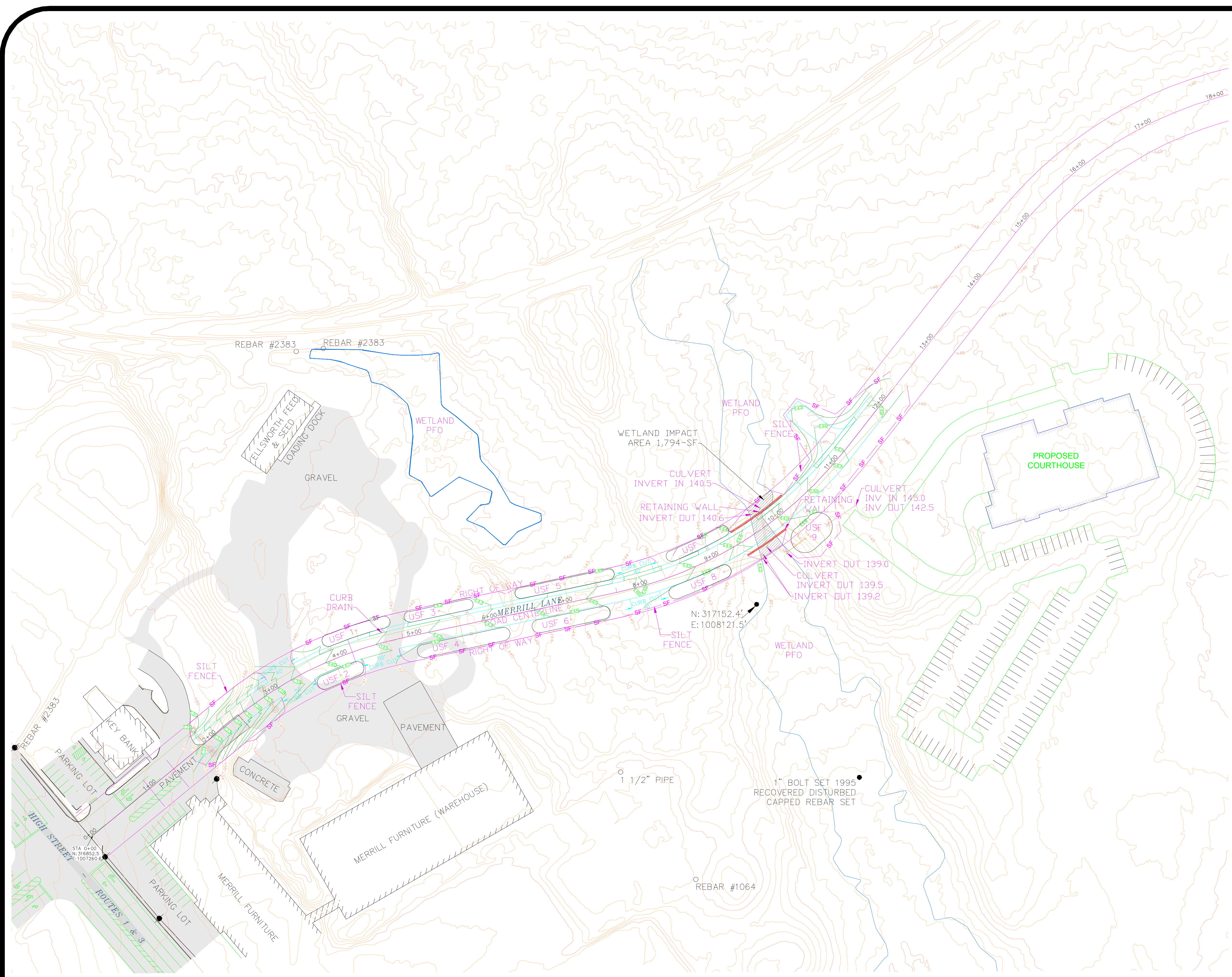
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
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DEVELOPED WASTERSHED PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.2
Date 10/30/25	
Scale 1"=50'	



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Record Owner and Address

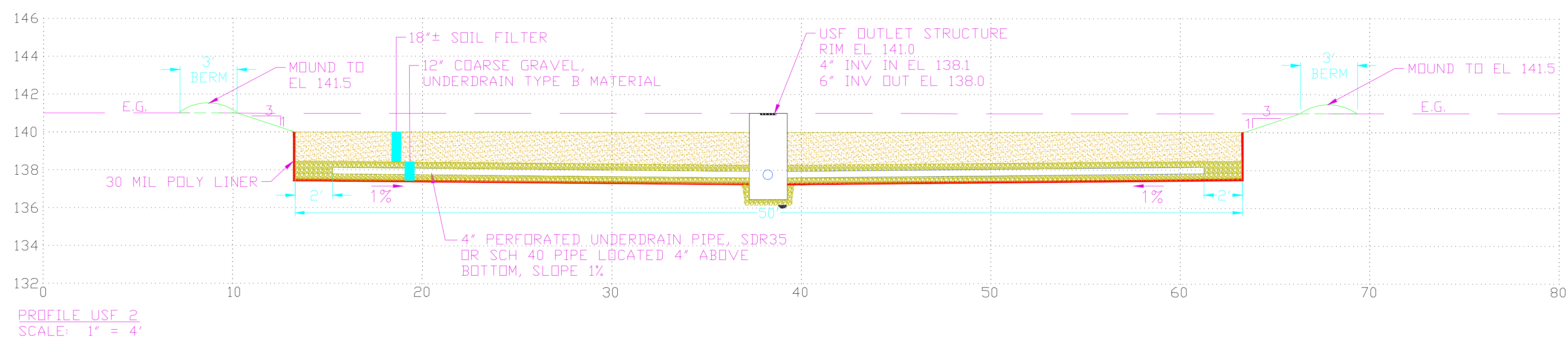
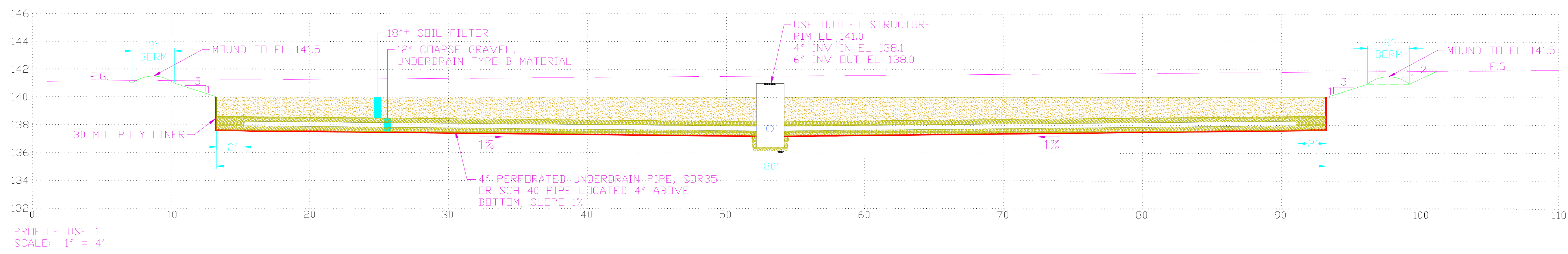
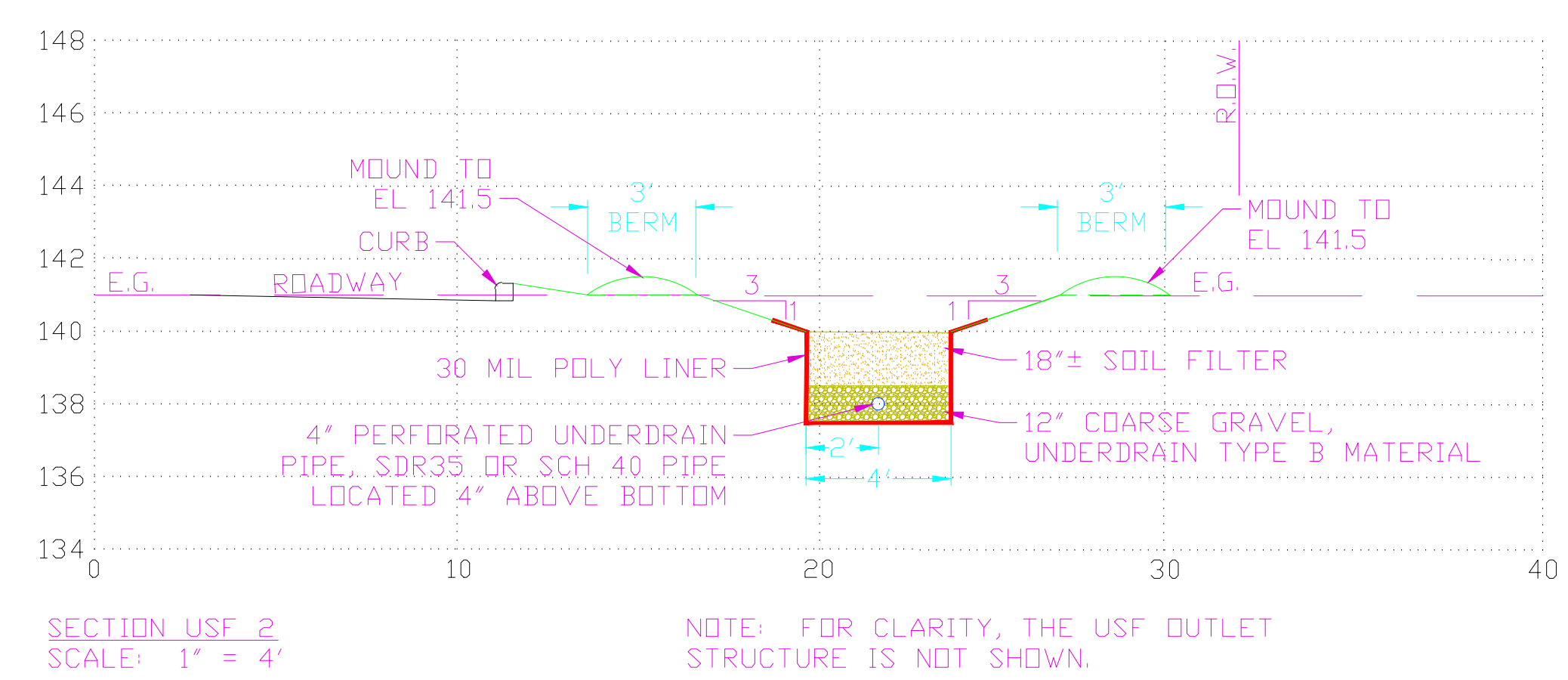
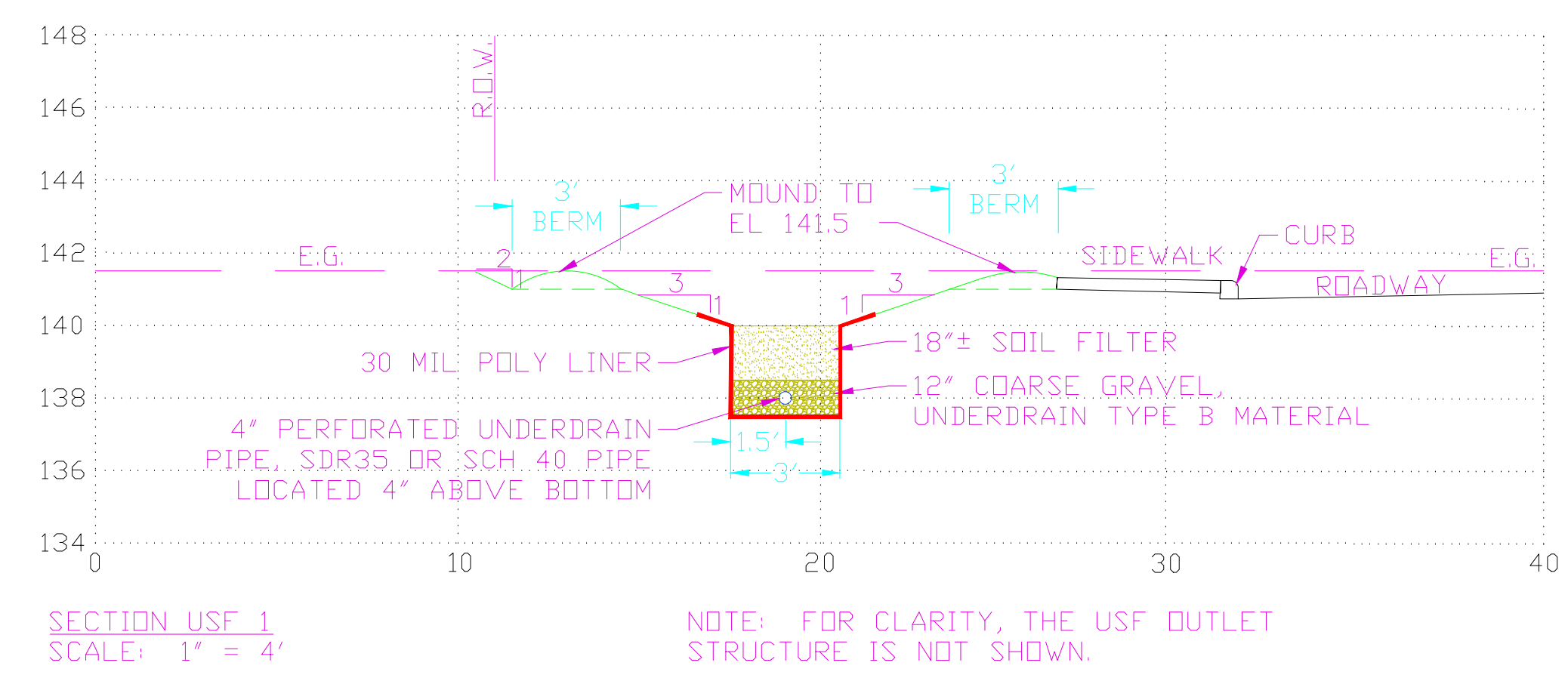
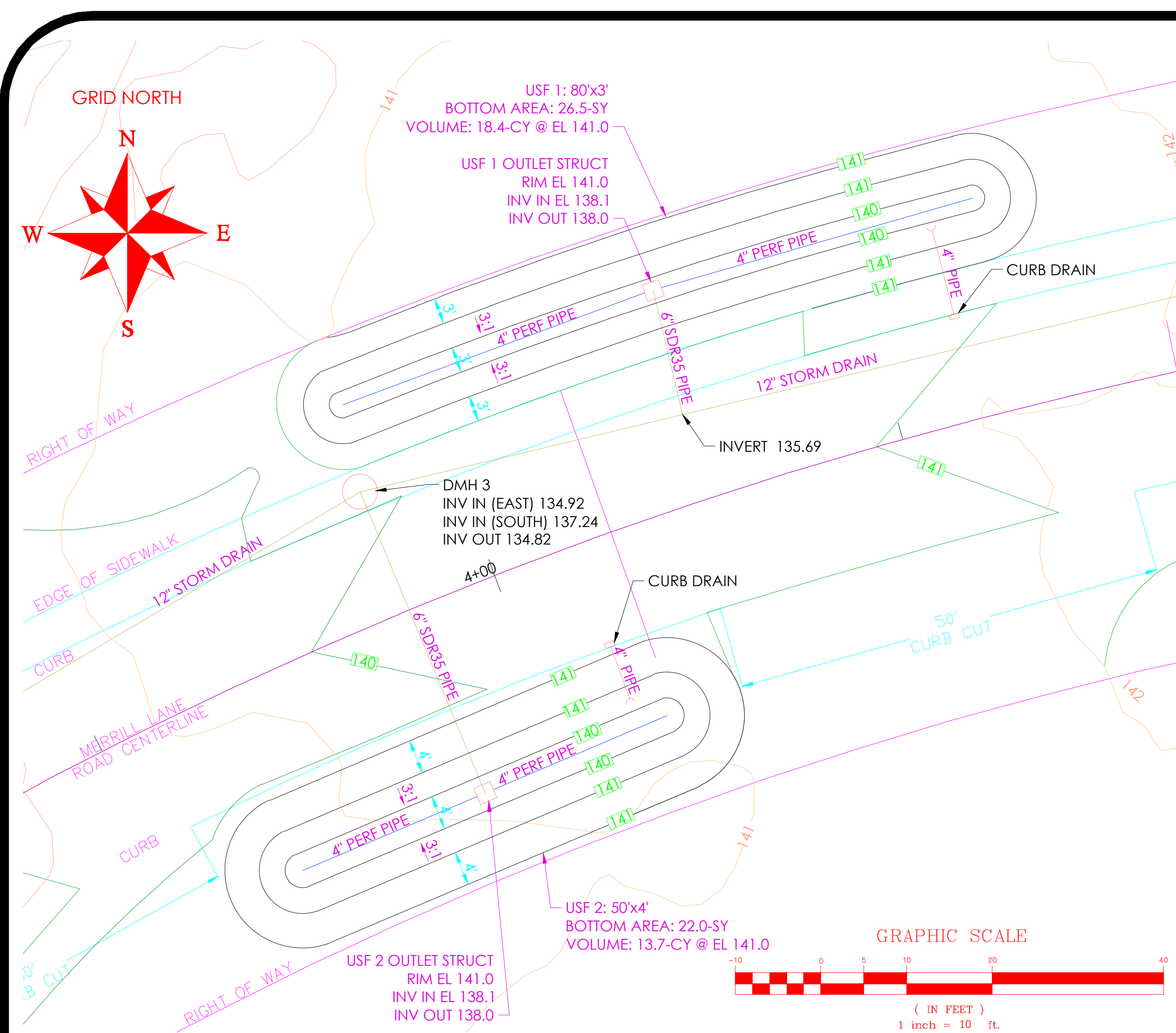
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address

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WETLAND IMPACT PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.3
Date 10/30/25	
Scale 1"=60'	



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

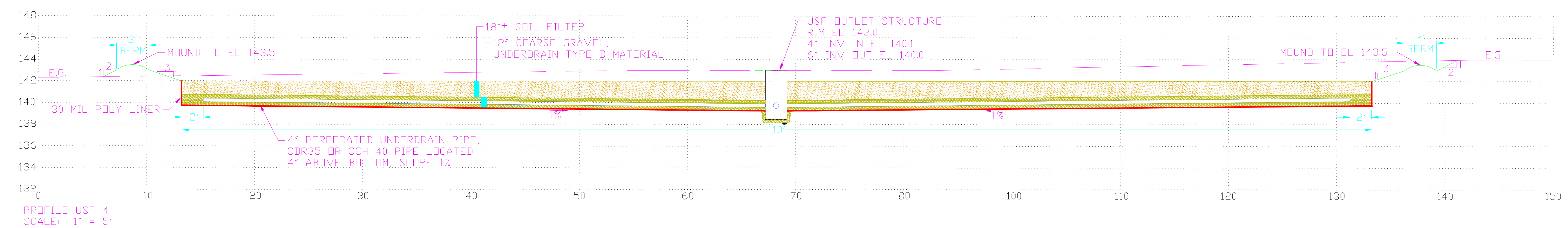
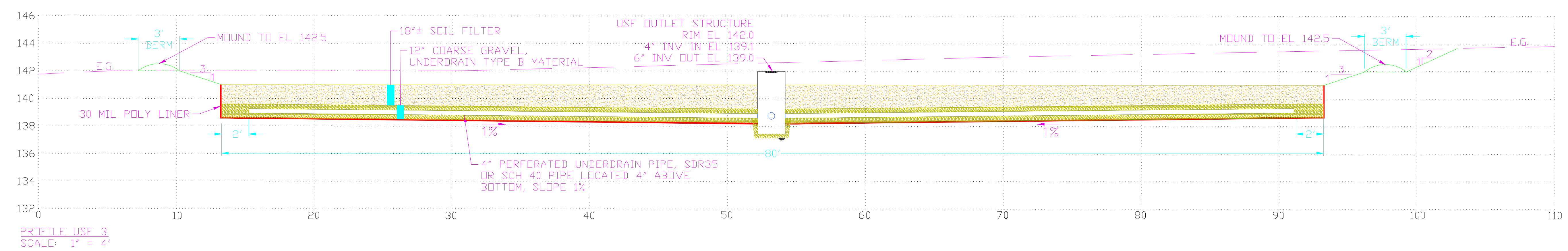
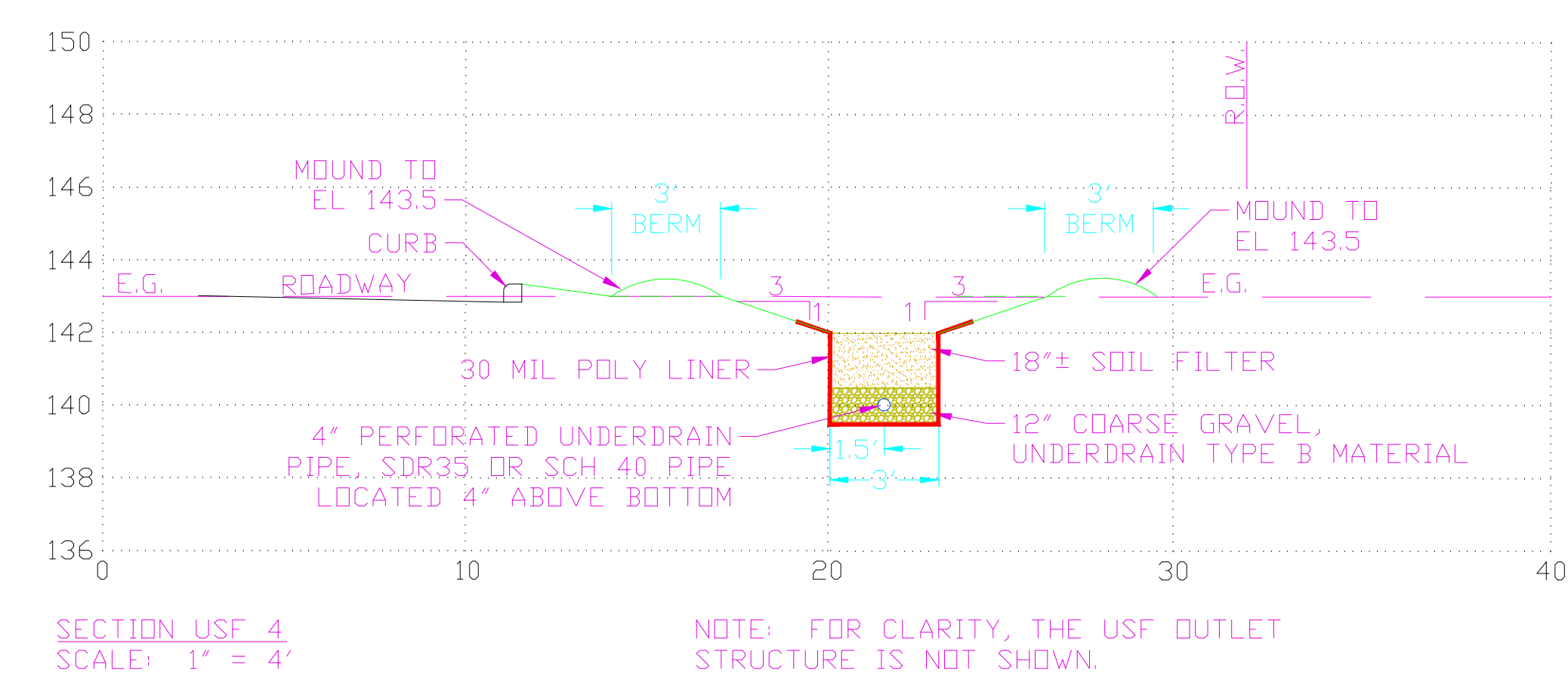
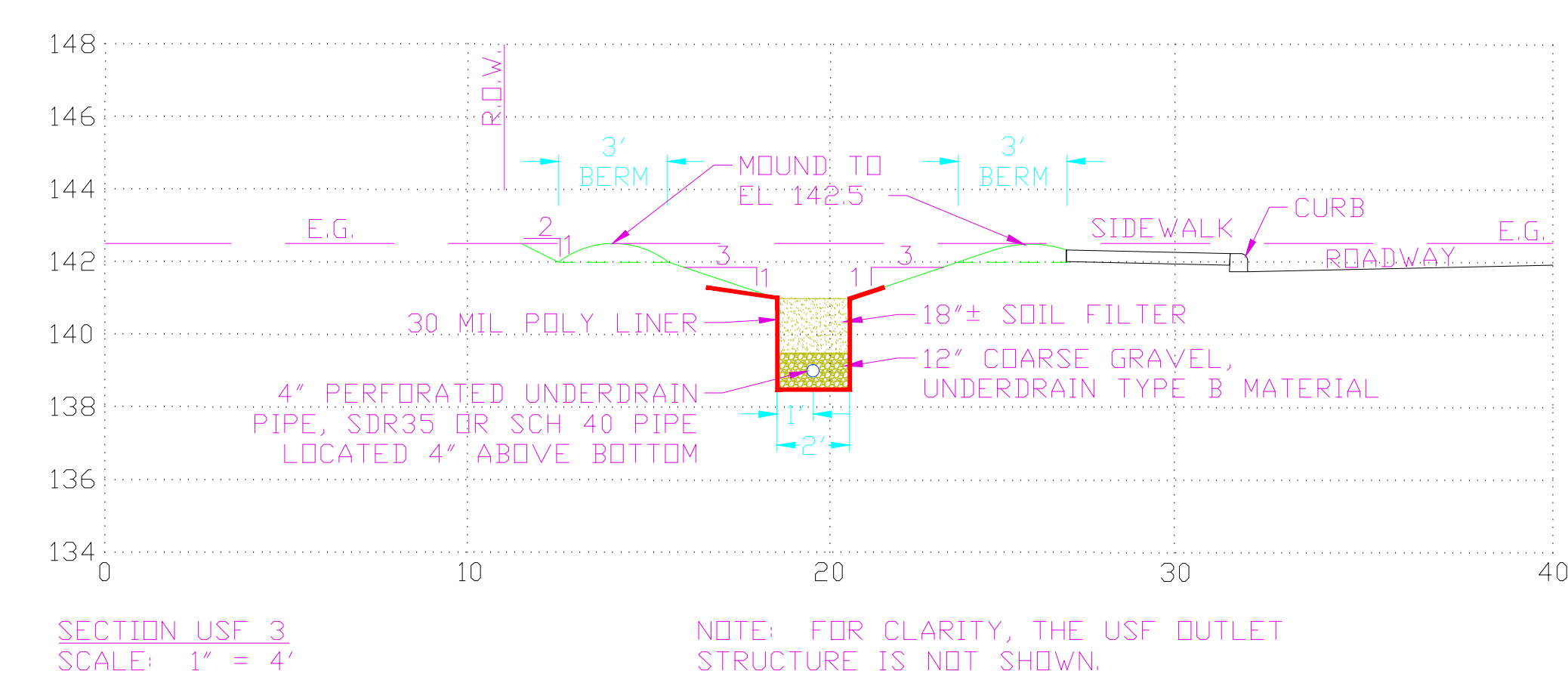
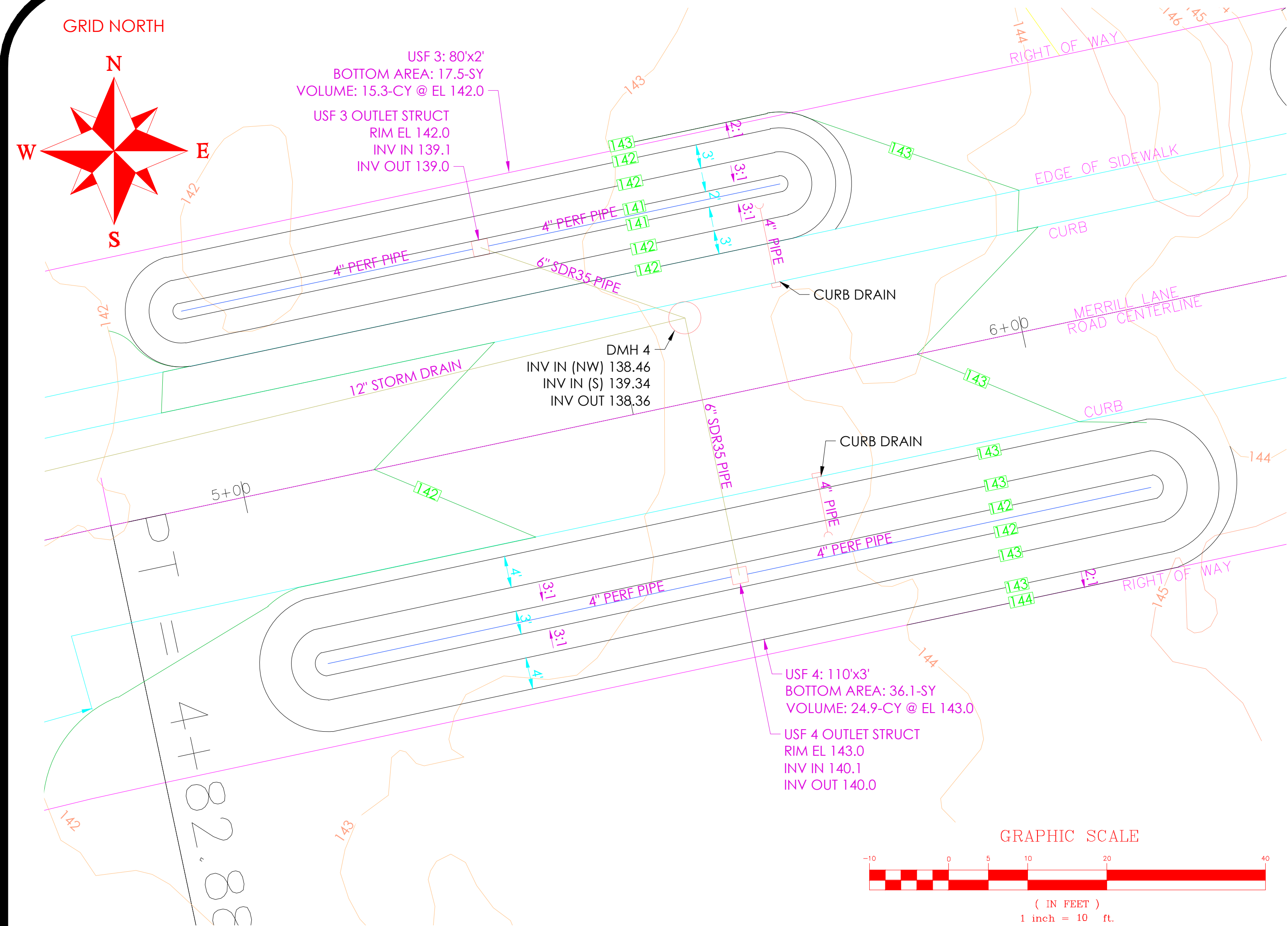
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
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USF 1 & 2
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project	Sheet
6508	C-1.4
Date	10/30/25
Scale	AS NOTED



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

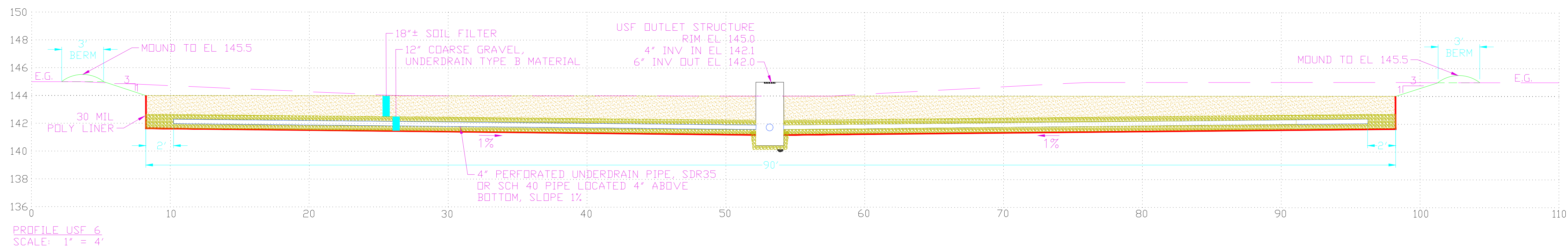
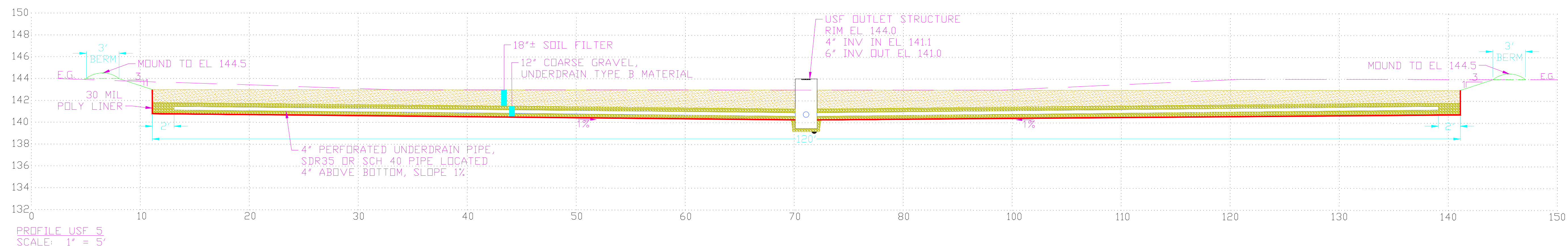
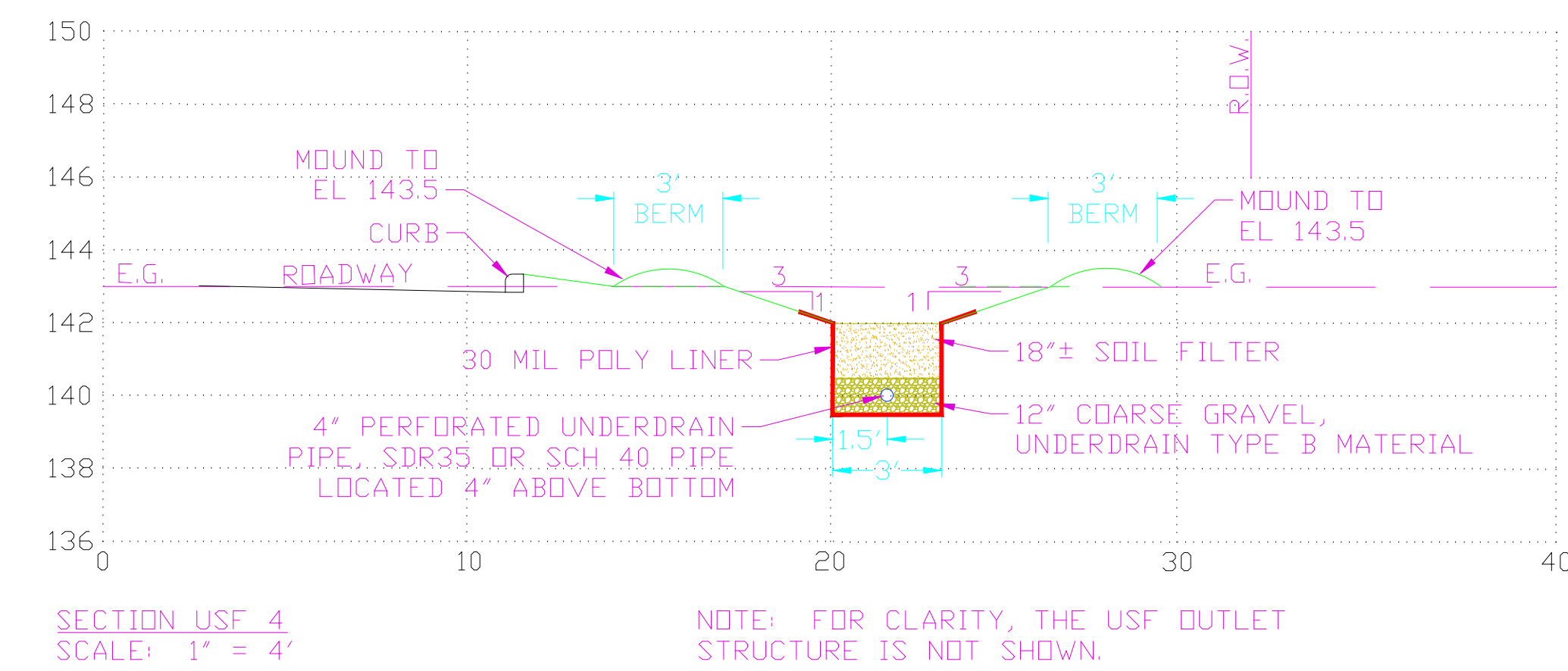
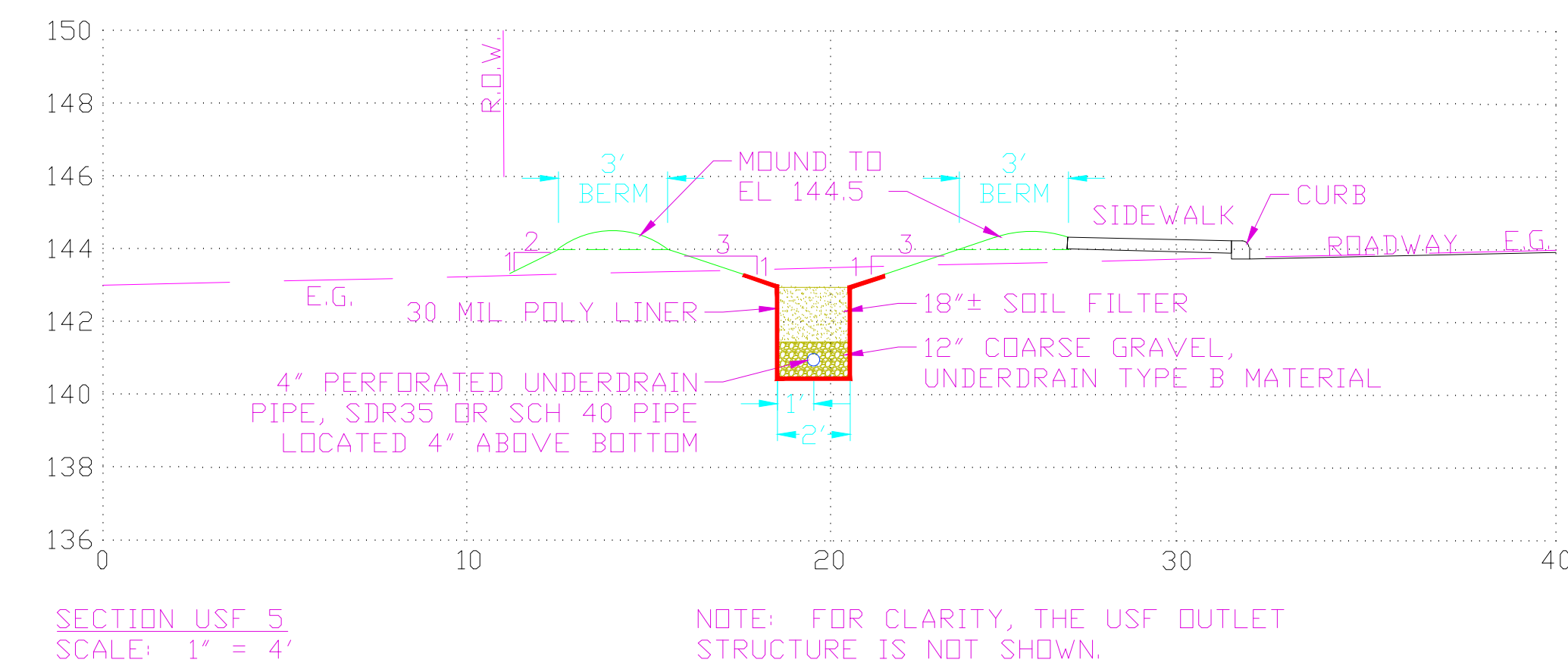
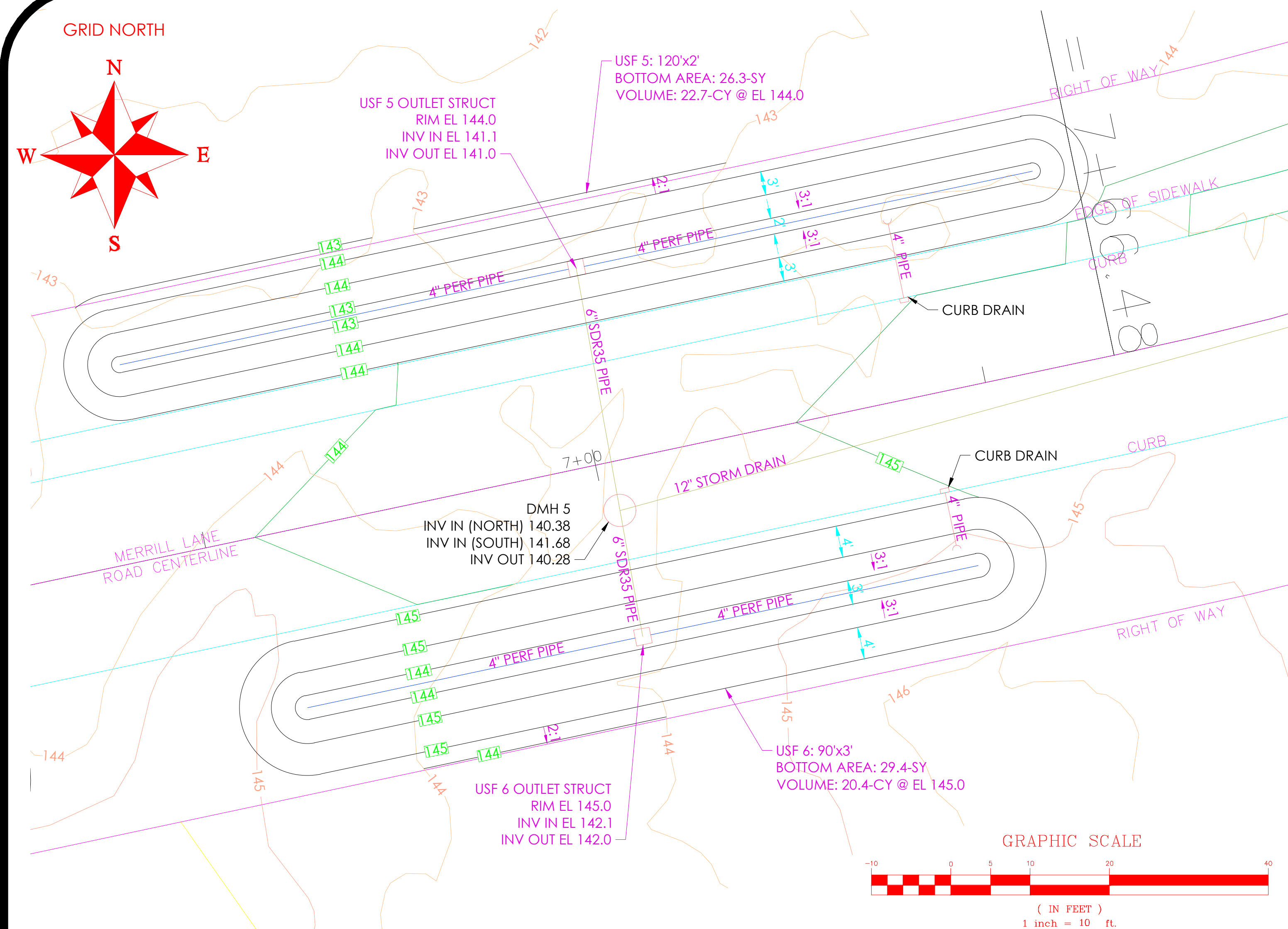
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

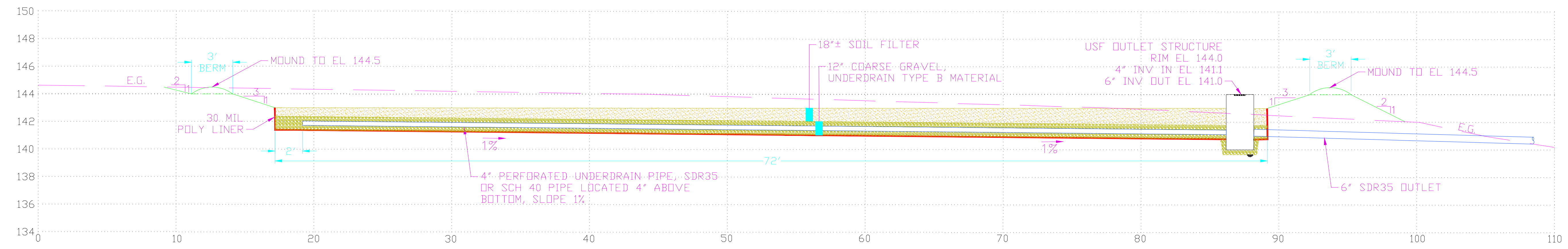
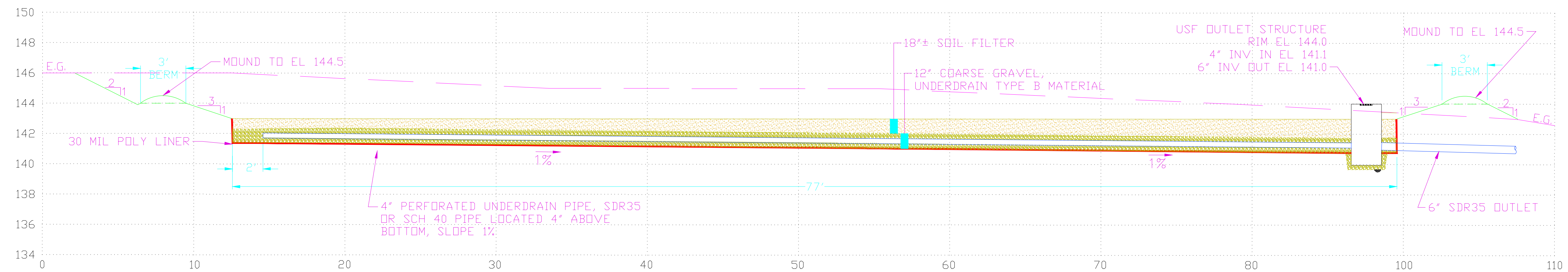
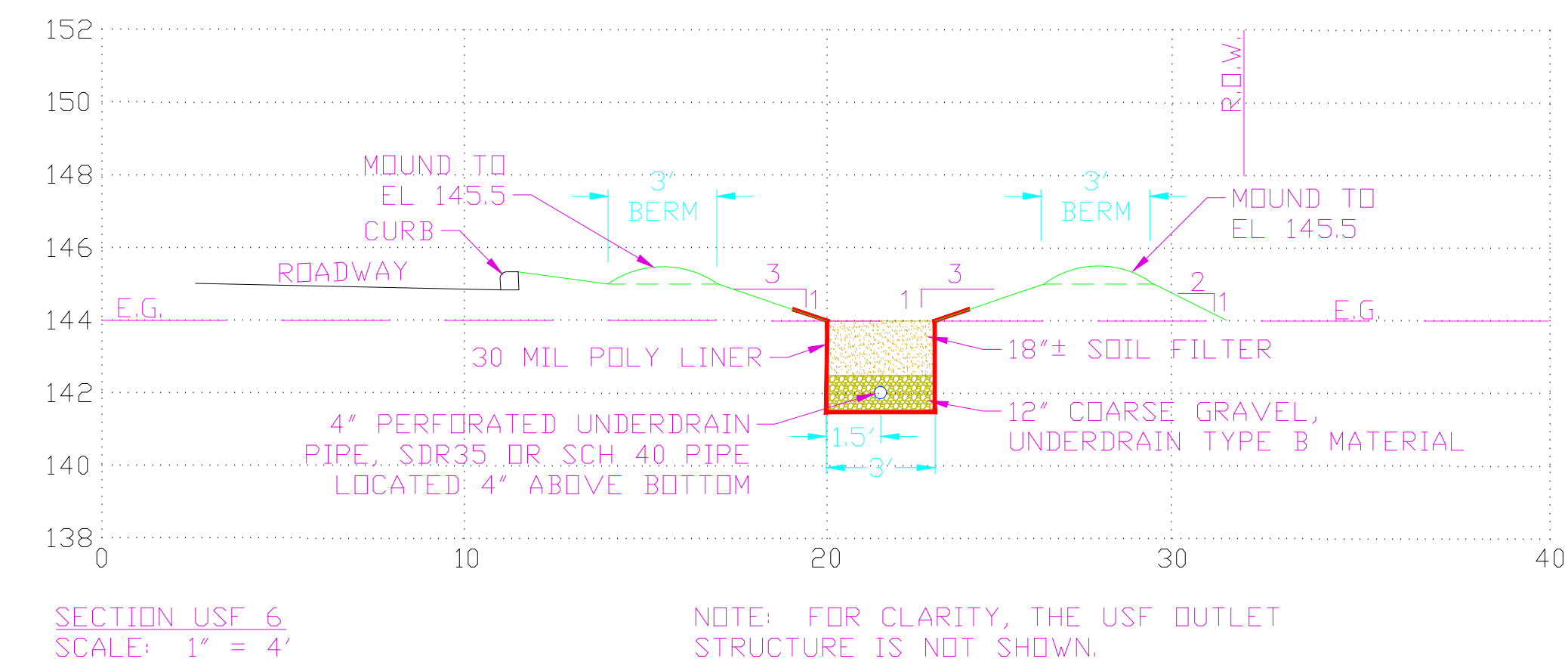
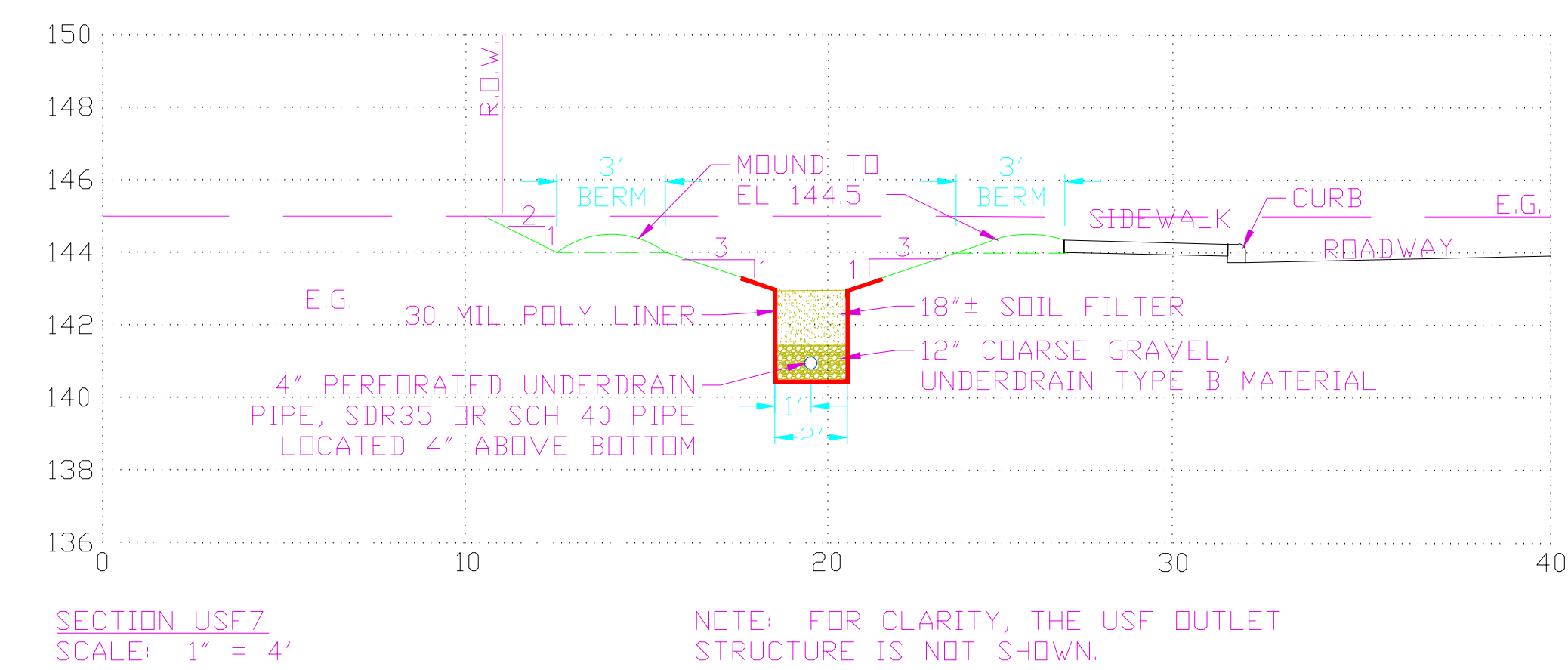
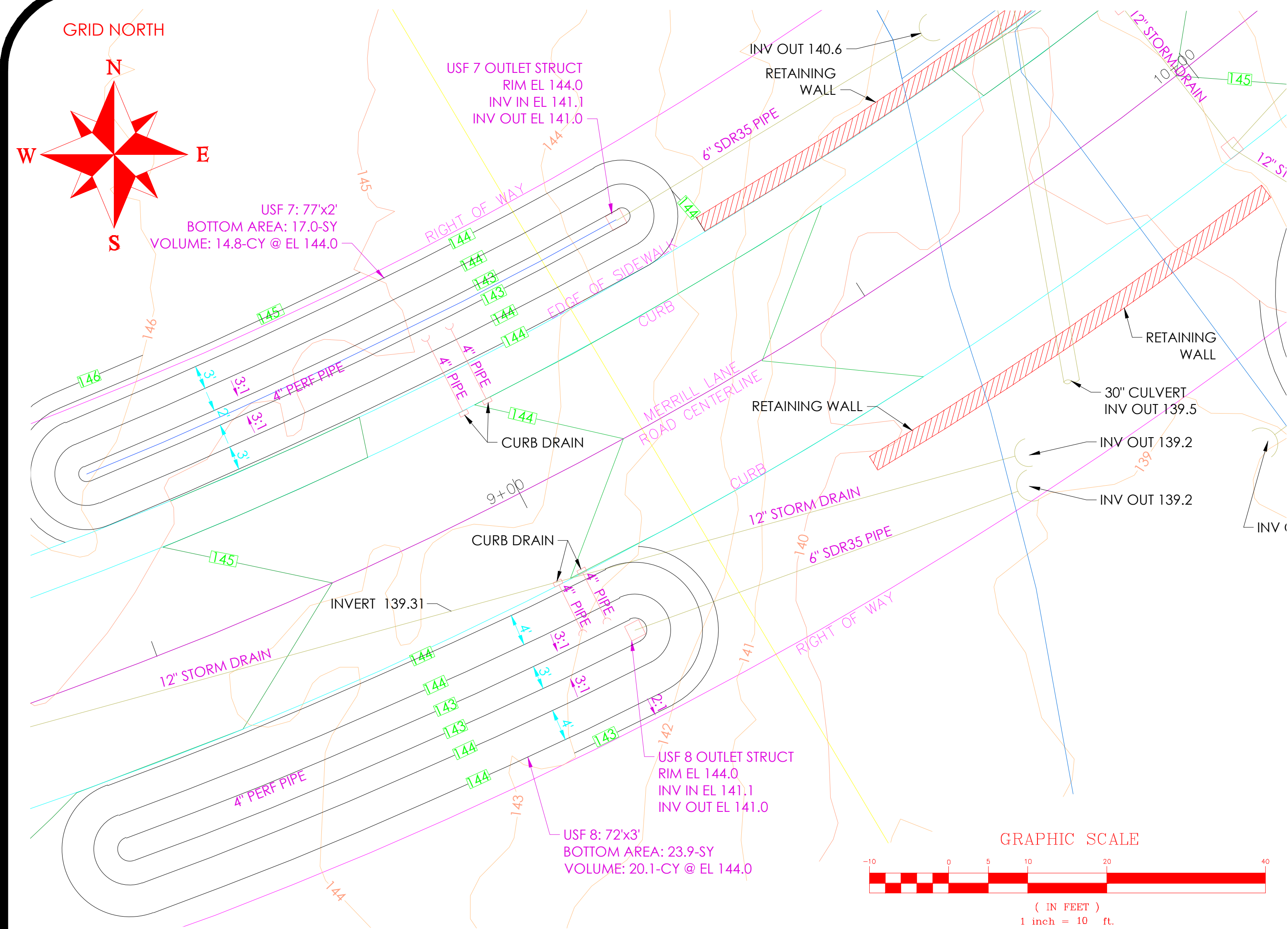
Firm Name and Address
Andrew McCullough
Engineering Consultants
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mccengr@gmail.com

USF 3 & 4
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project	Sheet
6508	C-1.5
Date	10/30/25
Scale	AS NOTED



General Notes		
PERMIT DRAWINGS NOT FOR CONSTRUCTION		
No.	Revision/Issue	Date
Record Owner and Address CITY OF ELLSWORTH 1 CITY HALL PLAZA ELLSWORTH, ME 04605		
Firm Name and Address Andrew McCullough Engineering Consultants 93 Bucksport Road Ellsworth, ME 207-667-6551 mccengr@gmail.com		
USF 5 & 6 MERRILL LANE EXTENSION Prepared For: CITY OF ELLSWORTH 1 City Hall Plaza Ellsworth, Maine		
Project 6508	Sheet C-1.6	
Date 10/30/25		
Scale AS NOTED		



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

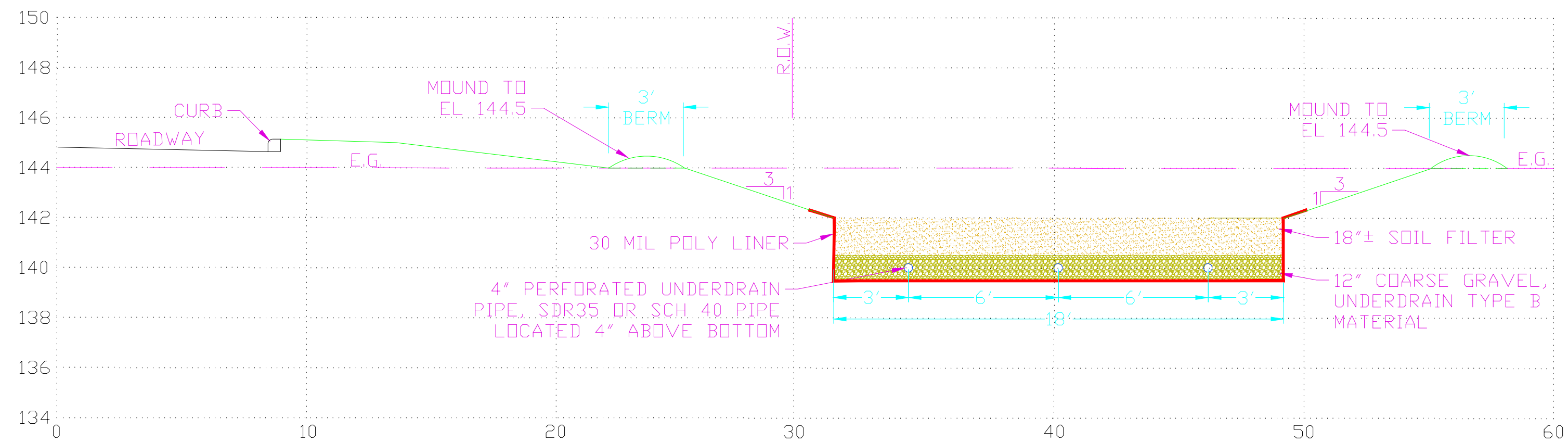
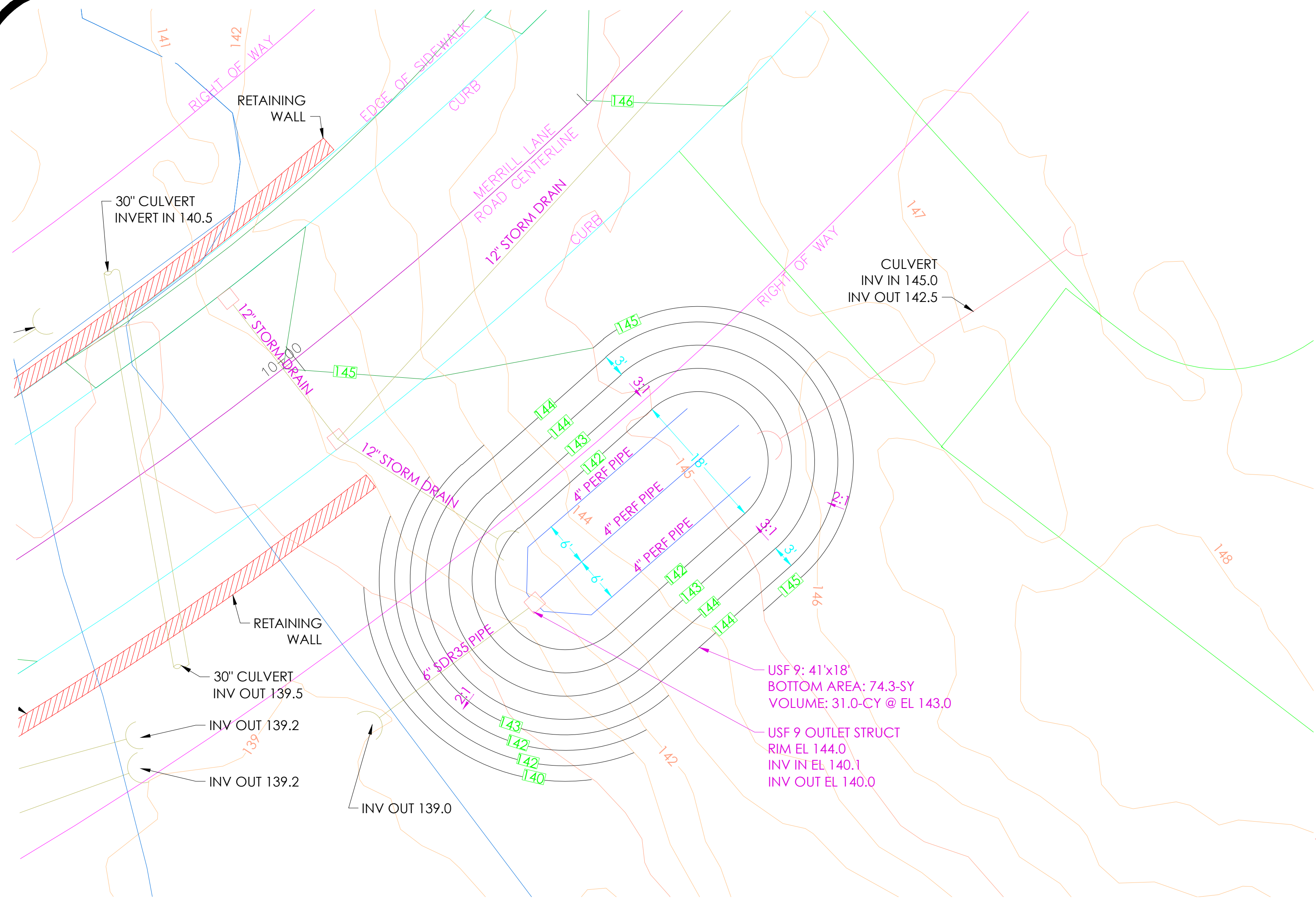
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
Ellsworth, ME
207-667-6551
mccengr@gmail.com

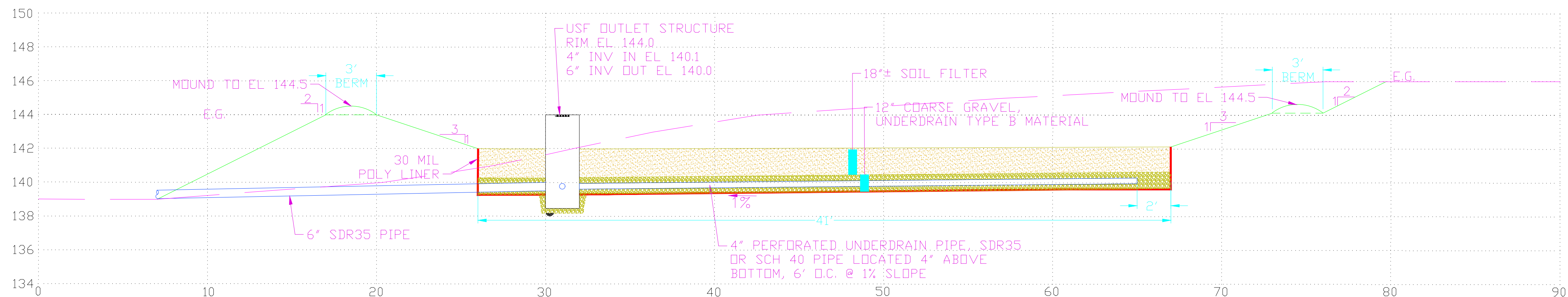
USF 7 & 8
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project	Sheet
6508	C-1.7
Date	10/30/25
Scale	AS NOTED



SECTION USF 9
SCALE: 1" = 4'

NOTE: FOR CLARITY, THE USF OUTLET
STRUCTURE IS NOT SHOWN.



PROFILE USF 9
SCALE: 1" = 4'

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

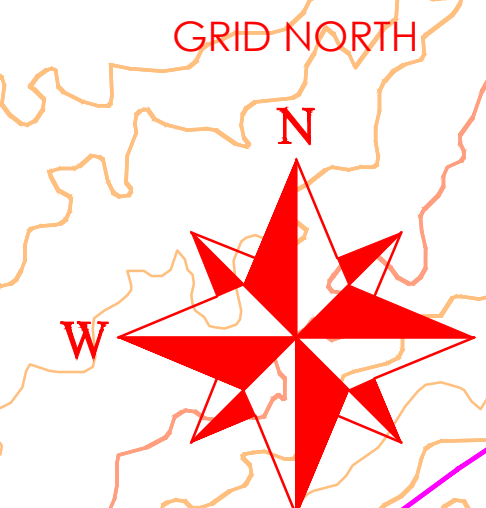
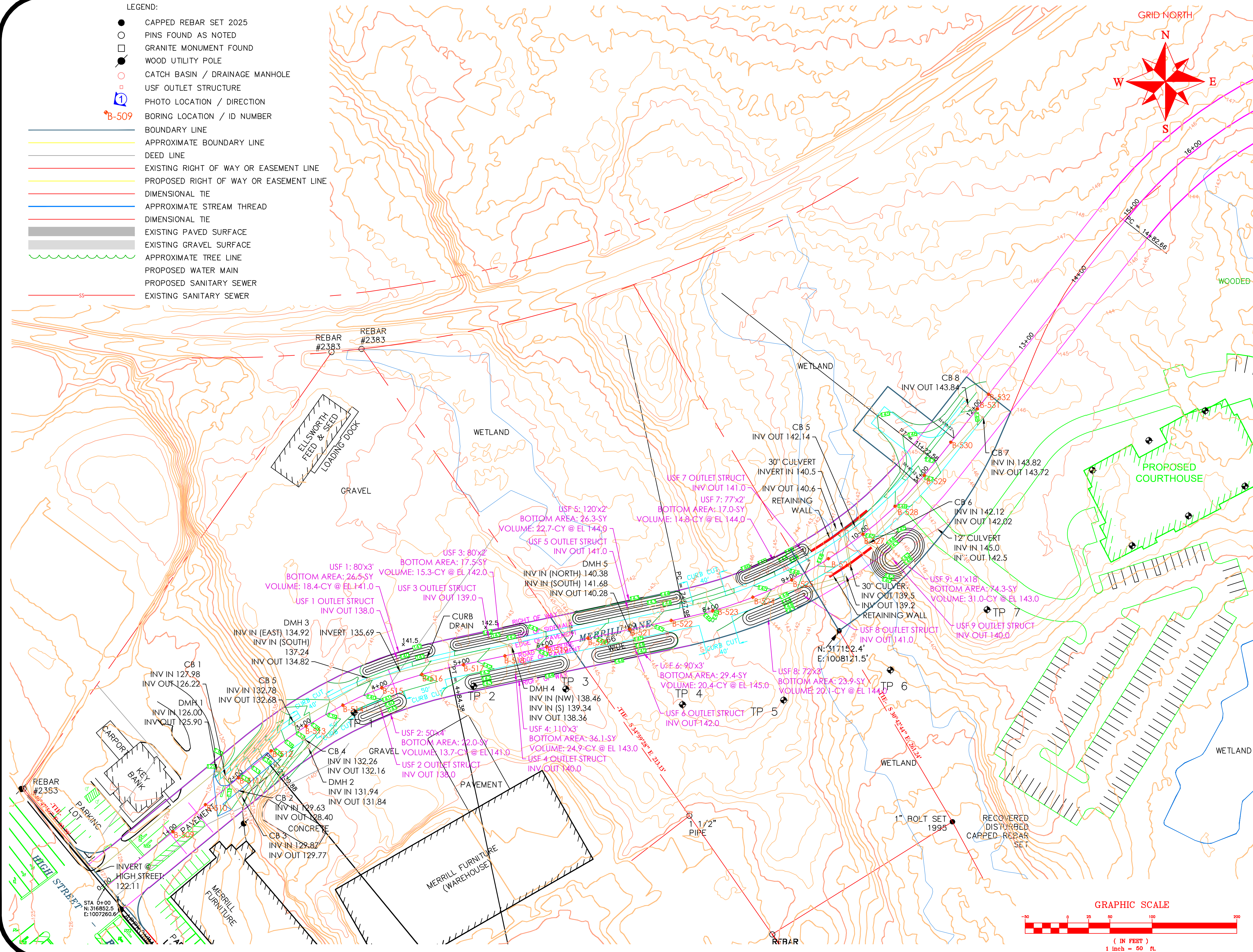
Firm Name and Address
Andrew McCullough
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93 Bucksport Road
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207-667-6551
mccengr@gmail.com

USF 9
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project	Sheet
6508	C-1.8
Date	10/30/25
Scale	AS NOTED

LEGEND:

- CAPPED REBAR SET 2025
- PINS FOUND AS NOTED
- GRANITE MONUMENT FOUND
- WOOD UTILITY POLE
- CATCH BASIN / DRAINAGE MANHOLE
- USF OUTLET STRUCTURE
- ① PHOTO LOCATION / DIRECTION
- B-509 BORING LOCATION / ID NUMBER
- BOUNDARY LINE
- APPROXIMATE BOUNDARY LINE
- DEED LINE
- EXISTING RIGHT OF WAY OR EASEMENT LINE
- PROPOSED RIGHT OF WAY OR EASEMENT LINE
- DIMENSIONAL TIE
- APPROXIMATE STREAM THREAD
- DIMENSIONAL TIE
- EXISTING PAVED SURFACE
- EXISTING GRAVEL SURFACE
- APPROXIMATE TREE LINE
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

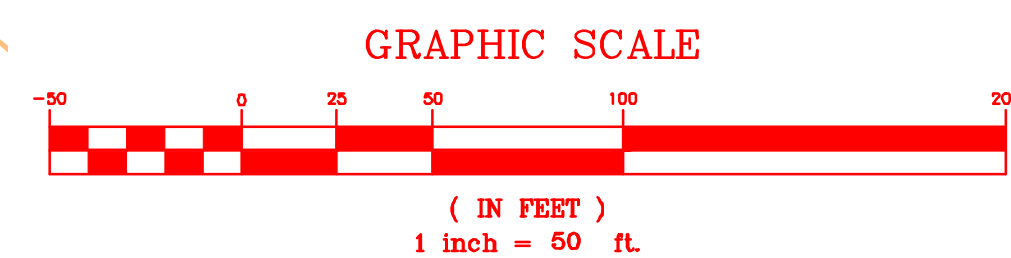
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
Ellsworth, ME
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mccengr@gmail.com

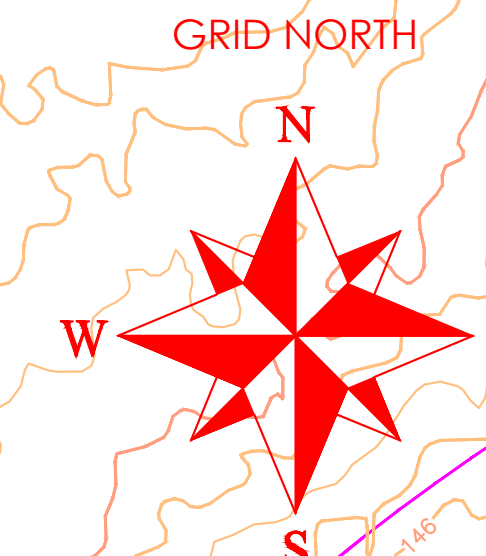
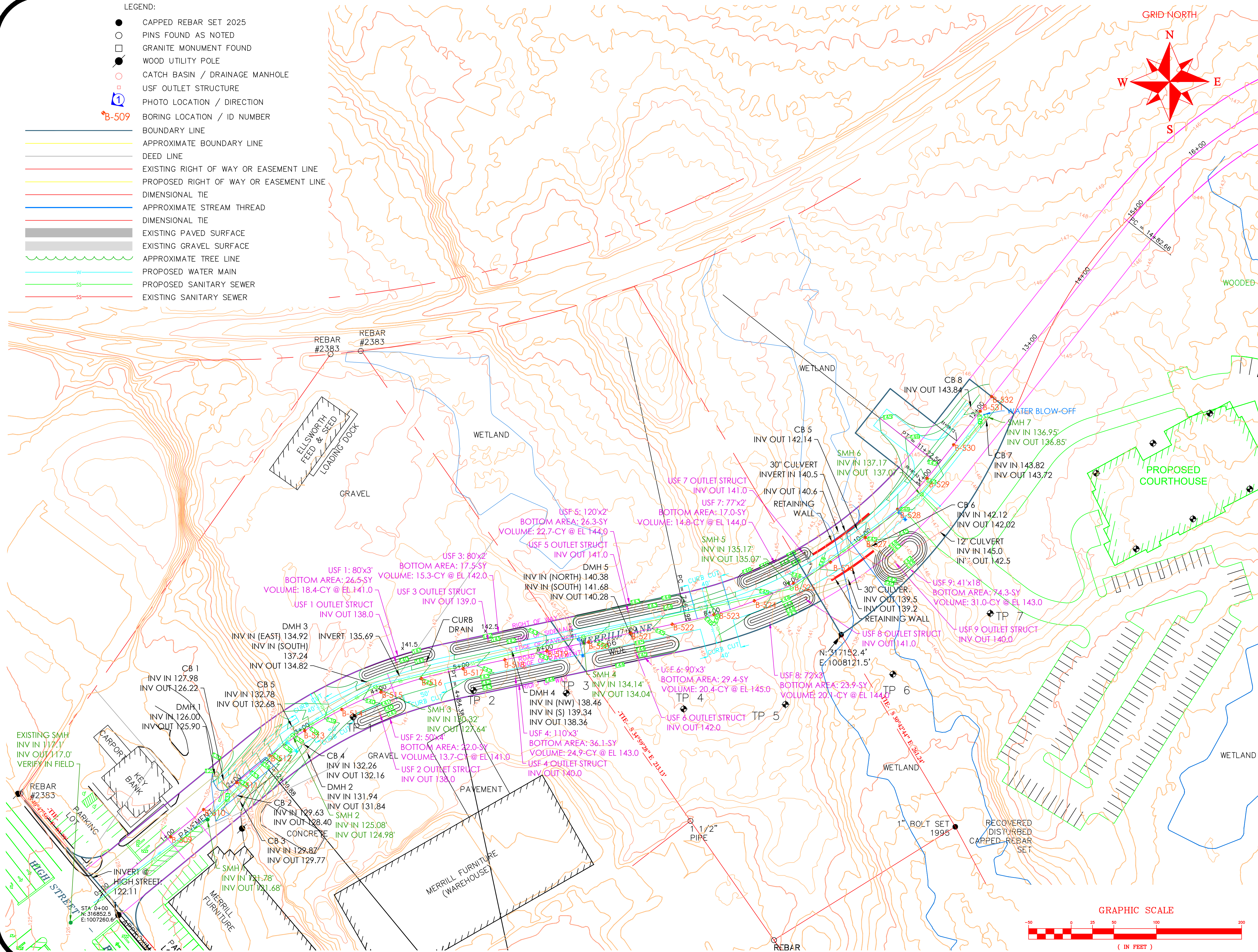
GRADING PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.9
Date 10/30/25	
Scale 1"=50'	



LEGEND:

- CAPPED REBAR SET 2025
- PINS FOUND AS NOTED
- GRANITE MONUMENT FOUND
- WOOD UTILITY POLE
- CATCH BASIN / DRAINAGE MANHOLE
- USF OUTLET STRUCTURE
- ④ PHOTO LOCATION / DIRECTION
- *B-509 BORING LOCATION / ID NUMBER
- BOUNDARY LINE
- APPROXIMATE BOUNDARY LINE
- DEED LINE
- EXISTING RIGHT OF WAY OR EASEMENT LINE
- PROPOSED RIGHT OF WAY OR EASEMENT LINE
- DIMENSIONAL TIE
- APPROXIMATE STREAM THREAD
- DIMENSIONAL TIE
- EXISTING PAVED SURFACE
- EXISTING GRAVEL SURFACE
- APPROXIMATE TREE LINE
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER



General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

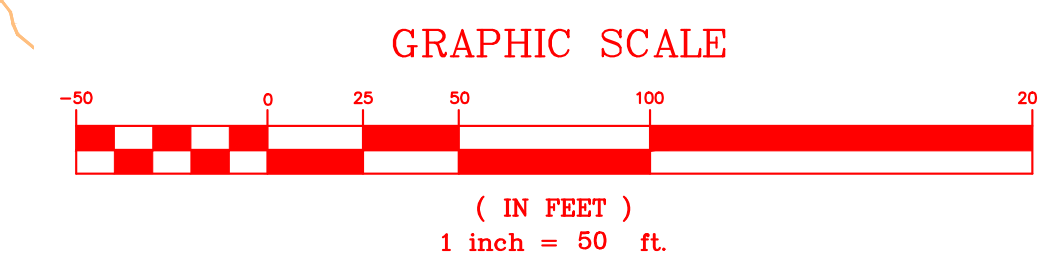
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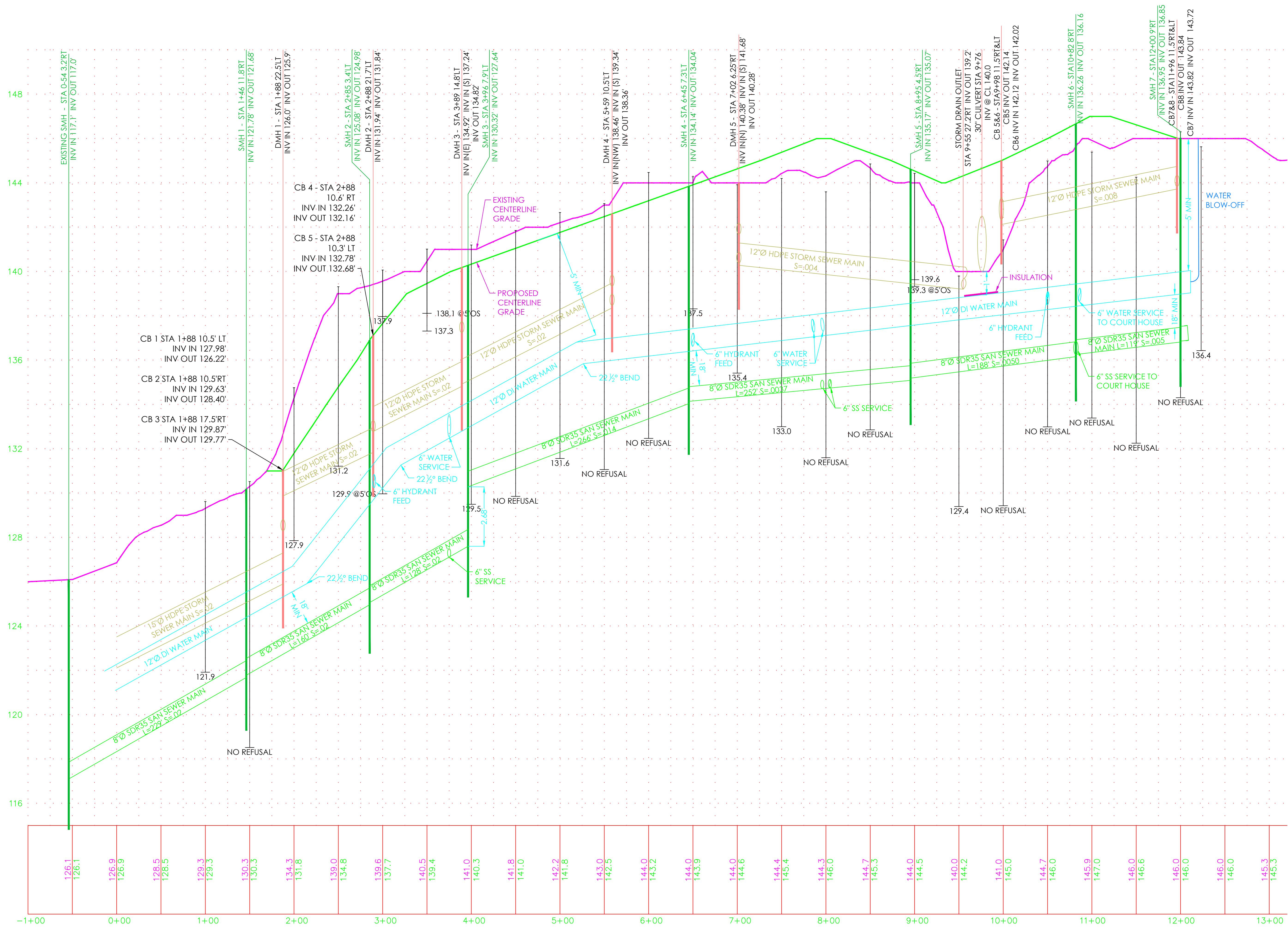
Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
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BURIED UTILITY PLAN
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.11
Date 10/30/25	
Scale 1"=50'	





General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

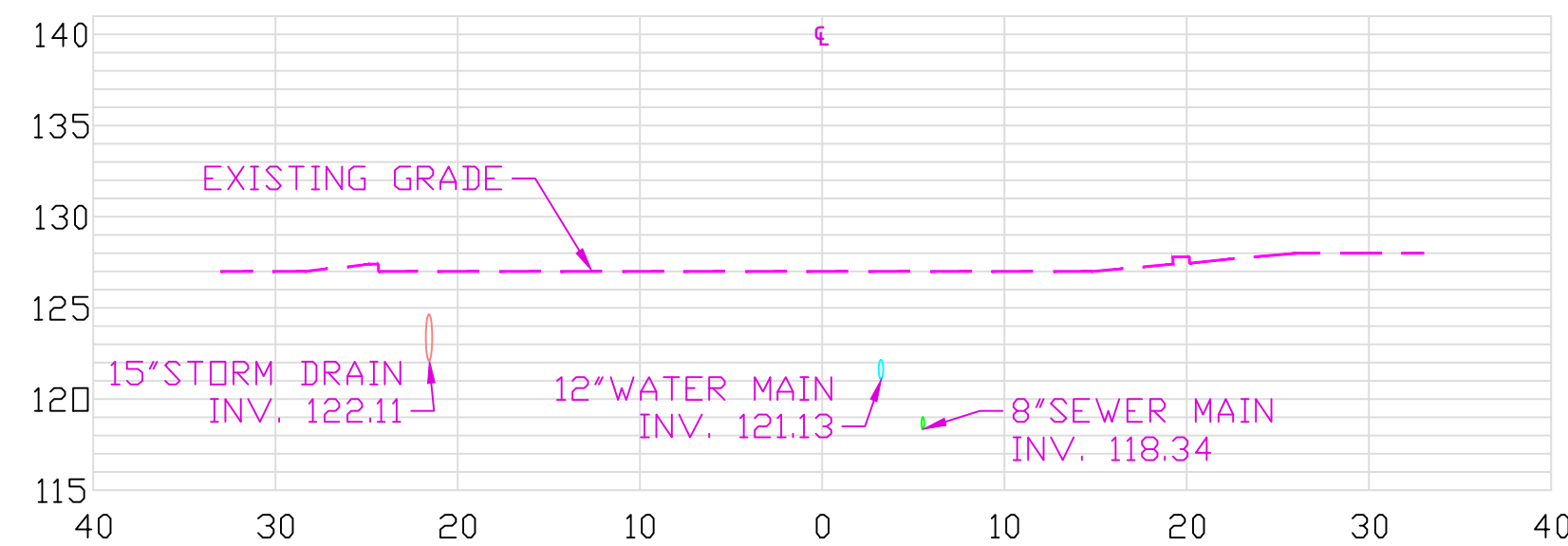
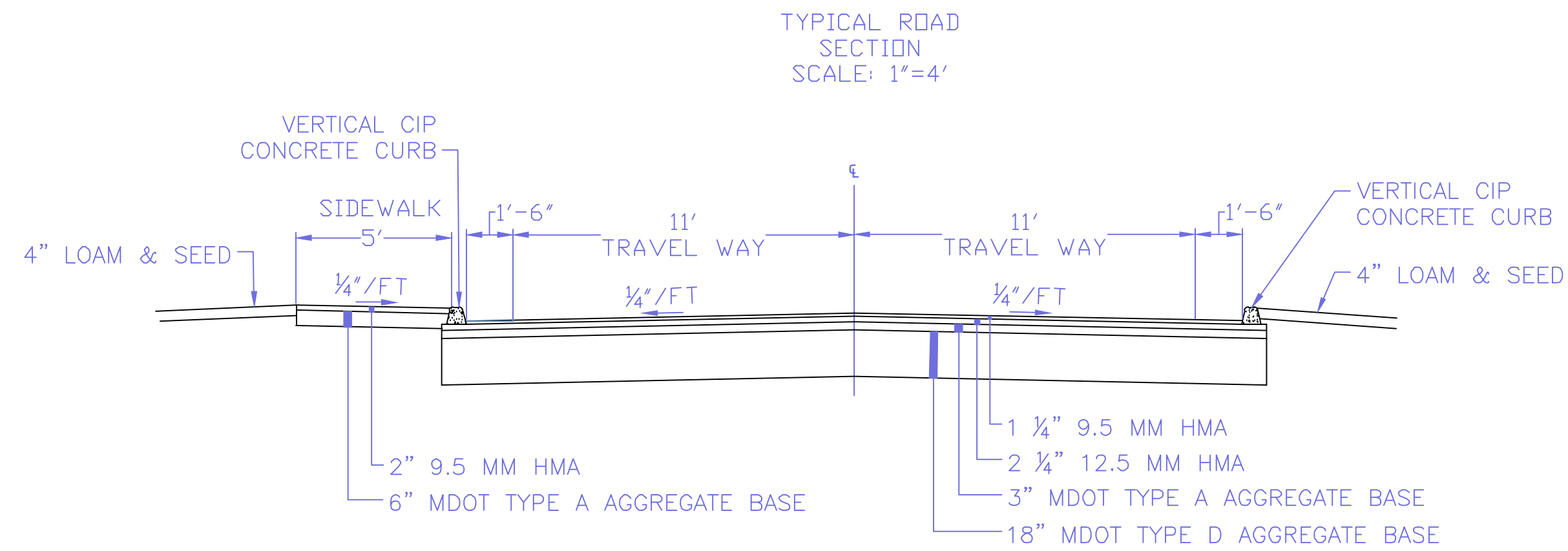
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

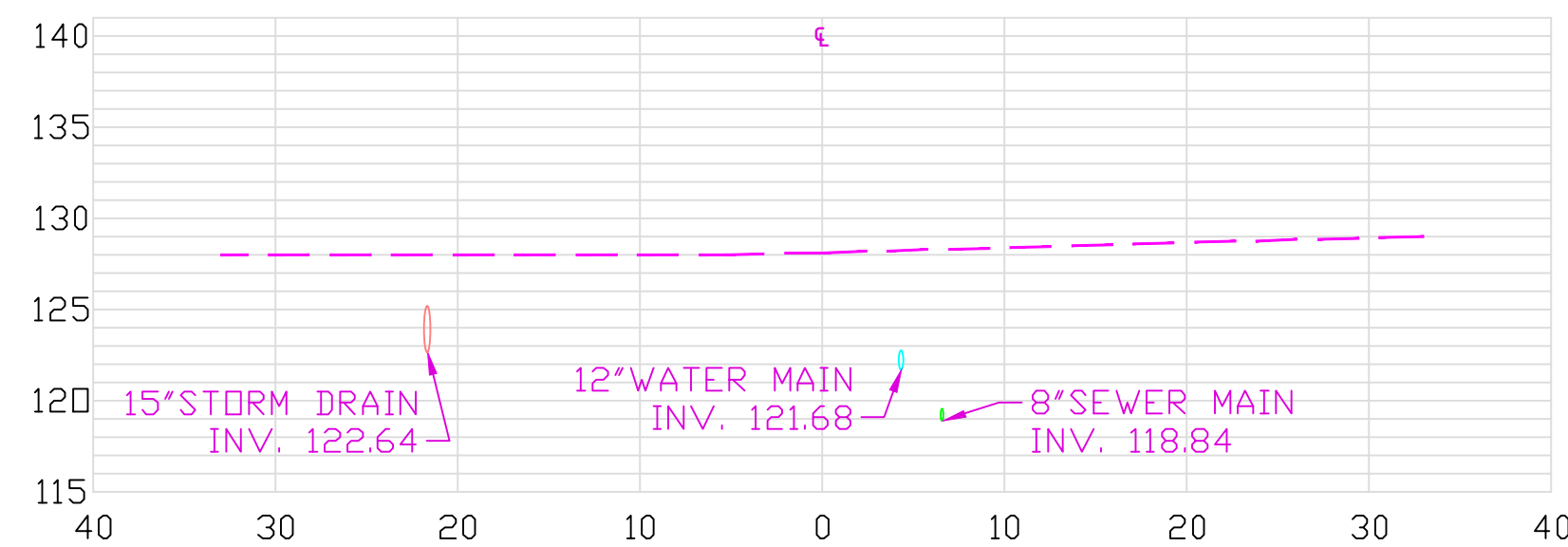
Firm Name and Address
Andrew McCullough
Engineering Consultants
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207-667-6551
mccengr@gmail.com

UTILITY PROFILE
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

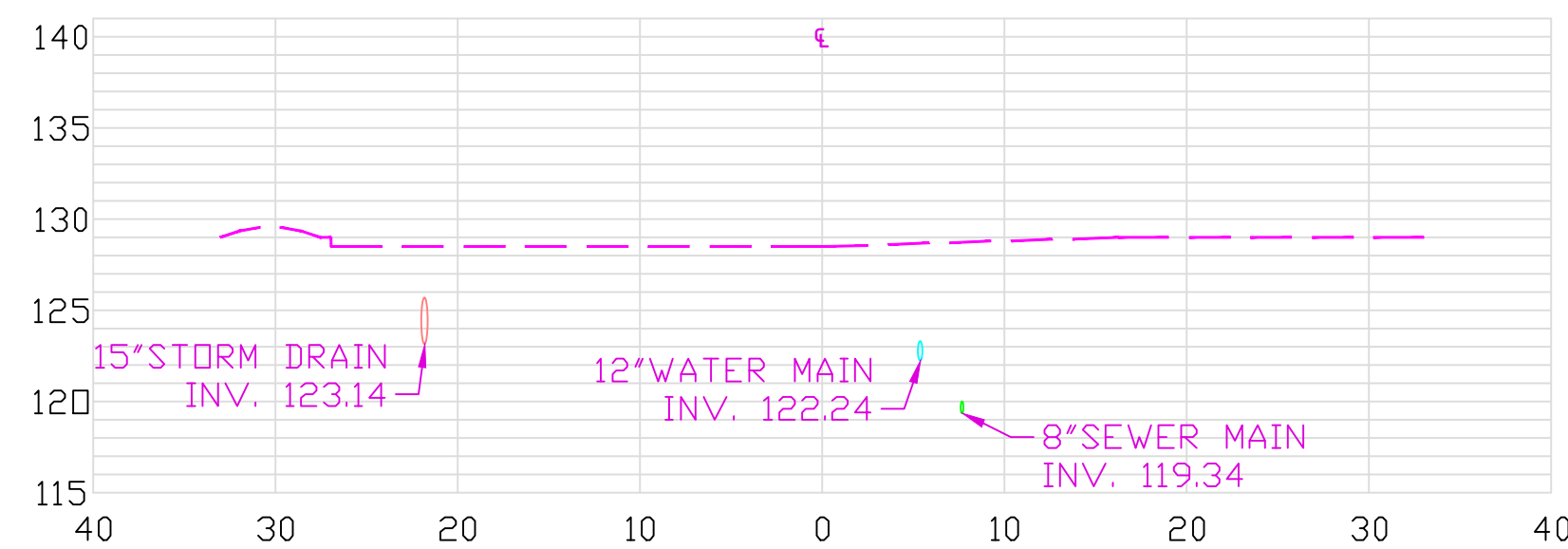
Project	Sheet
6508	C-1.12
Date	10/30/25
Scale	1/2" = 1' VERT 1" = 50' HORIZ



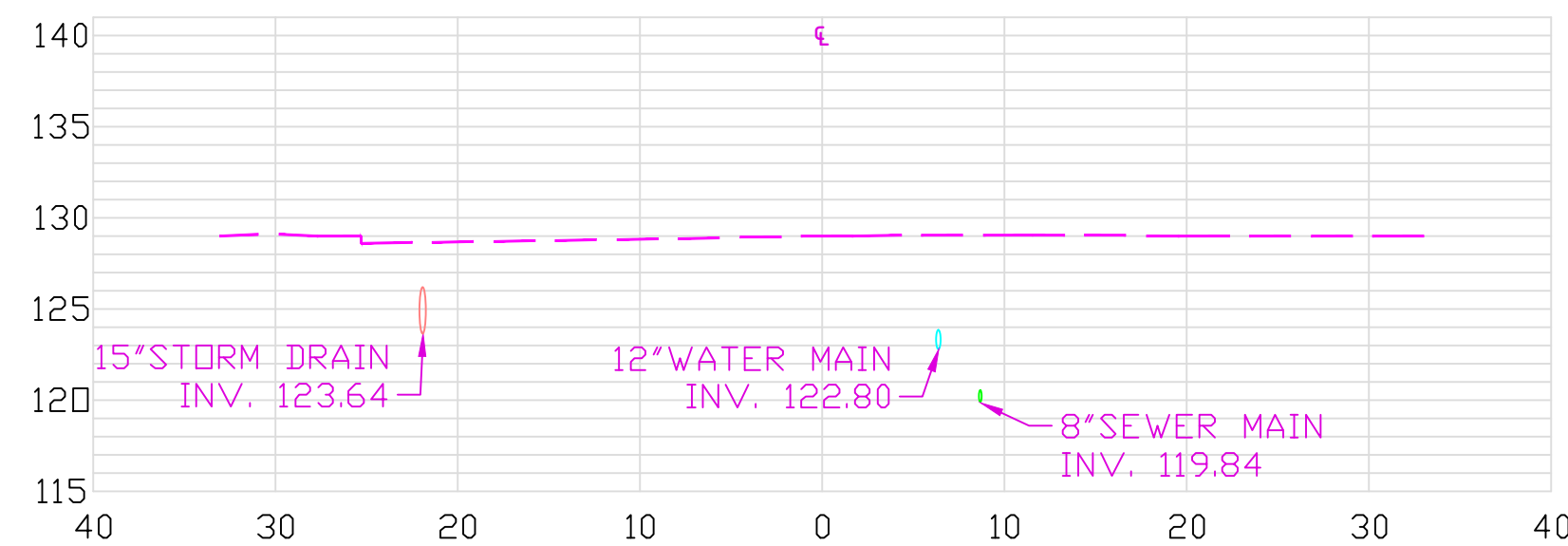
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EXIST. CL ELEV 126.9
PRDP. CL ELEV 126.9



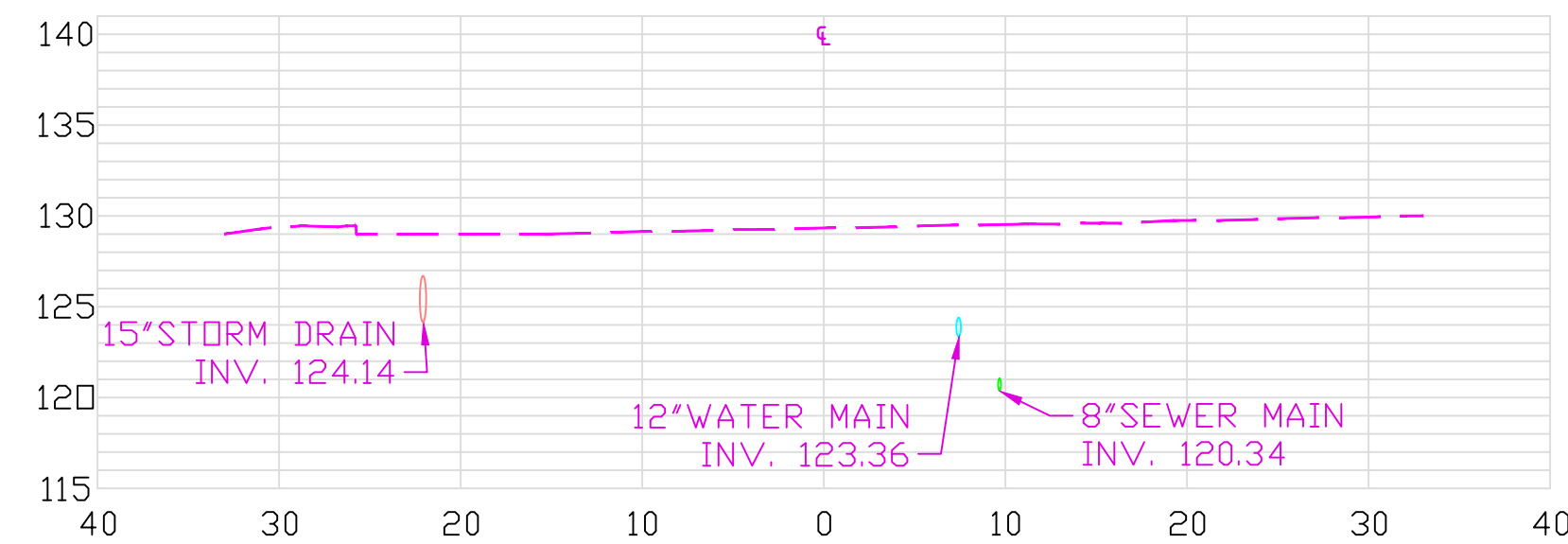
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PRDP. CL ELEV 128.1



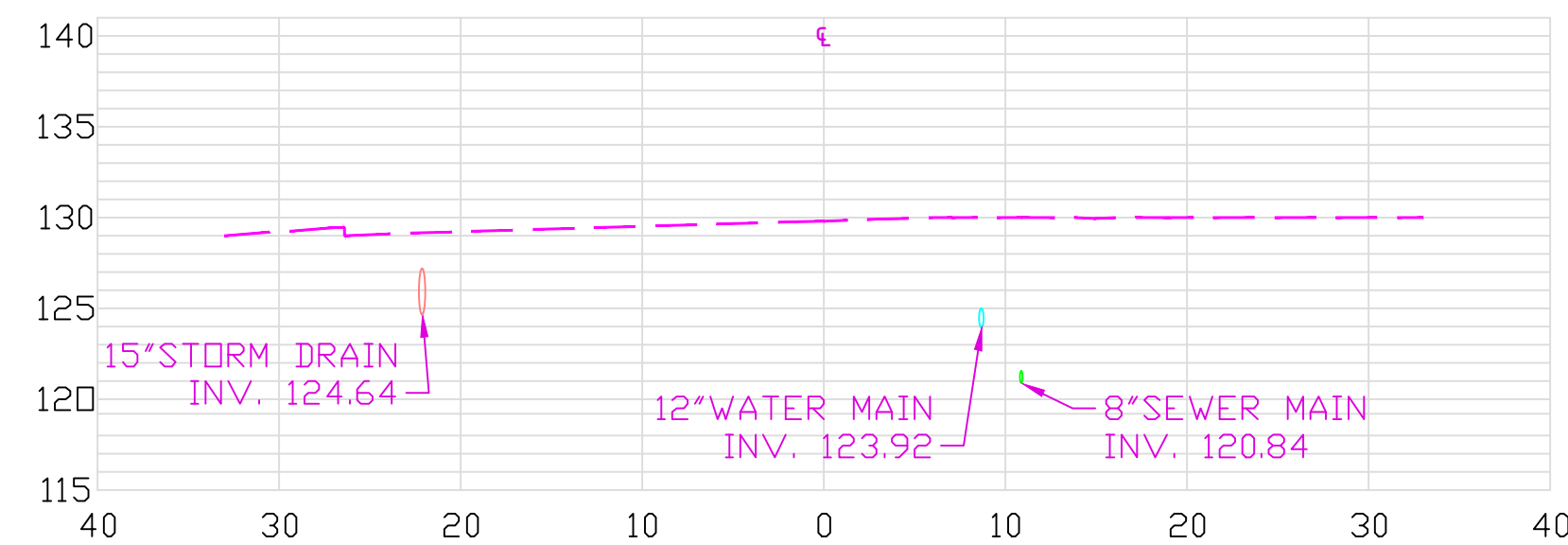
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PRDP. CL ELEV 128.5



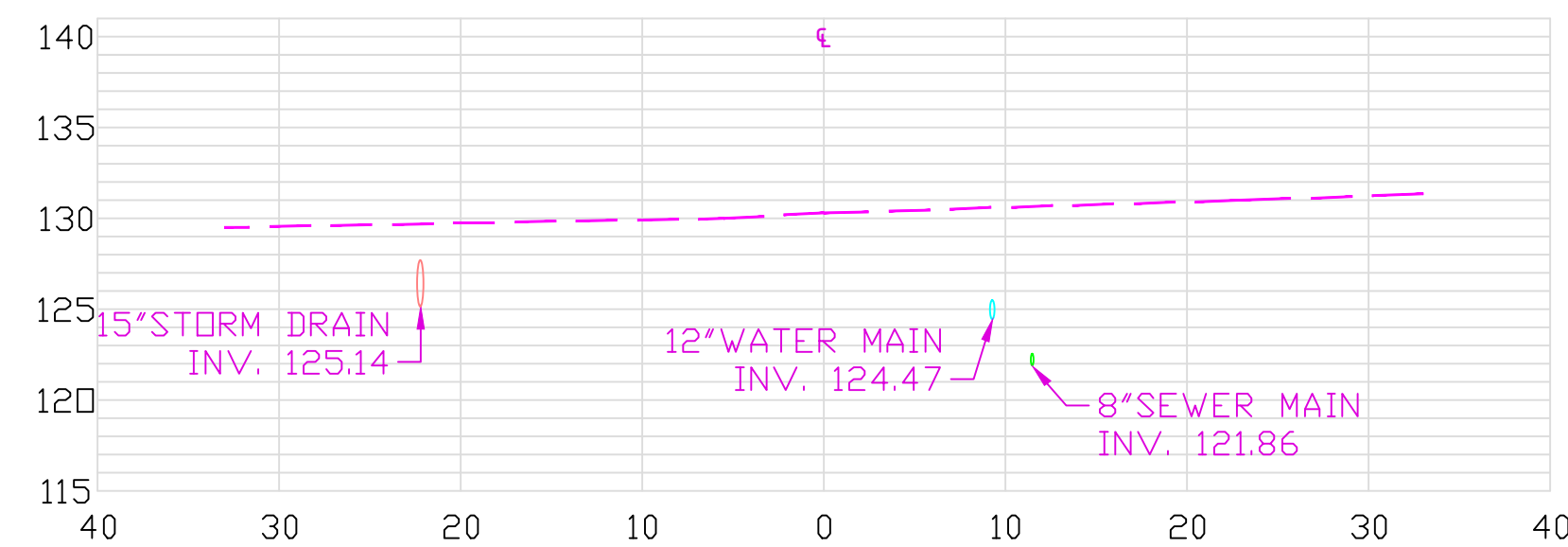
STATION 0+75
EXIST. CL ELEV 128.9
PRDP. CL ELEV 128.9



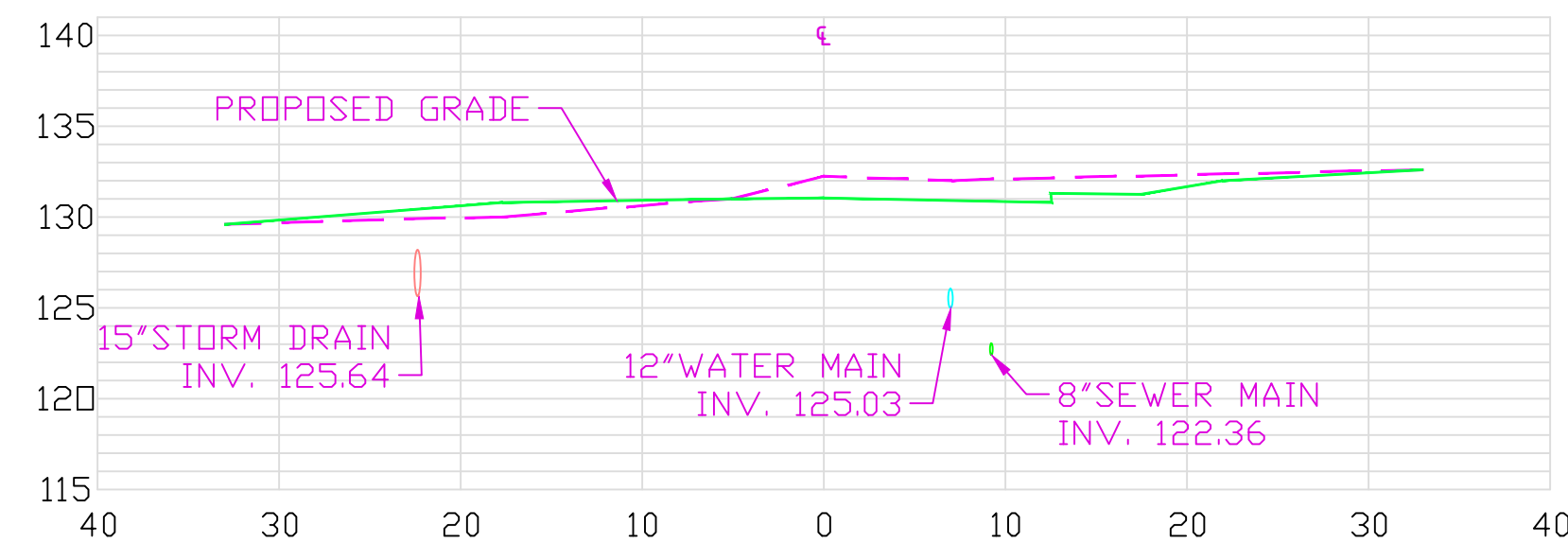
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PRDP. CL ELEV 129.3



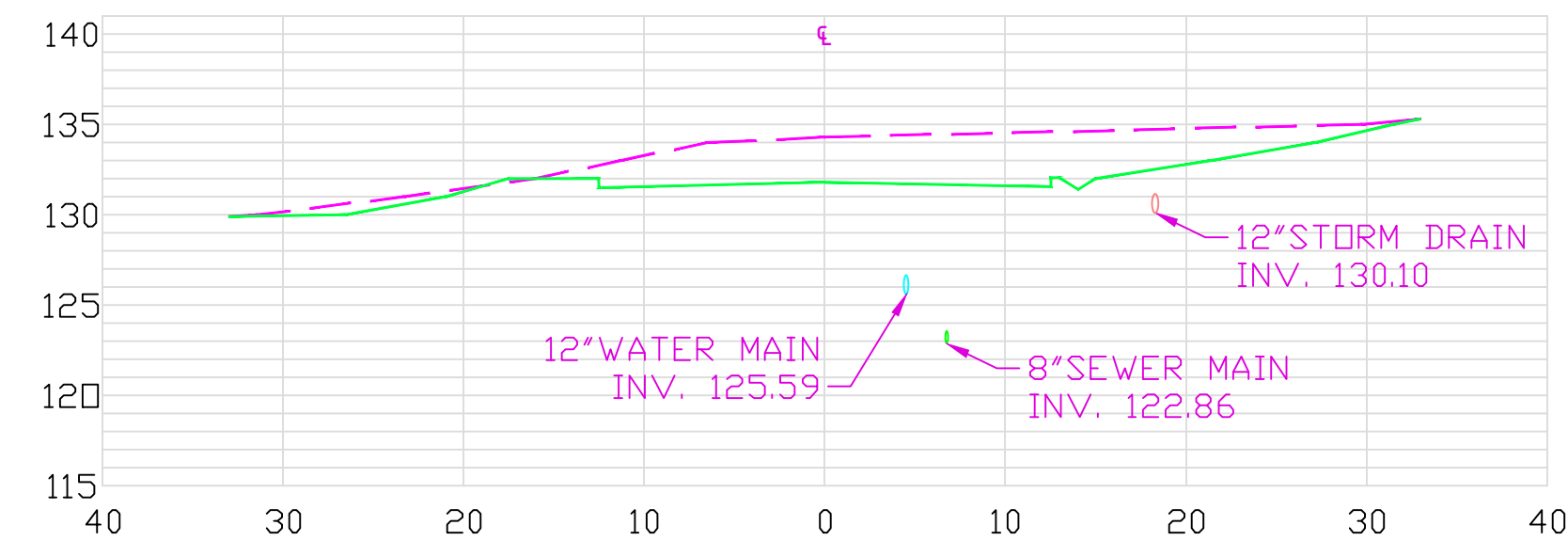
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PRDP. CL ELEV 129.8



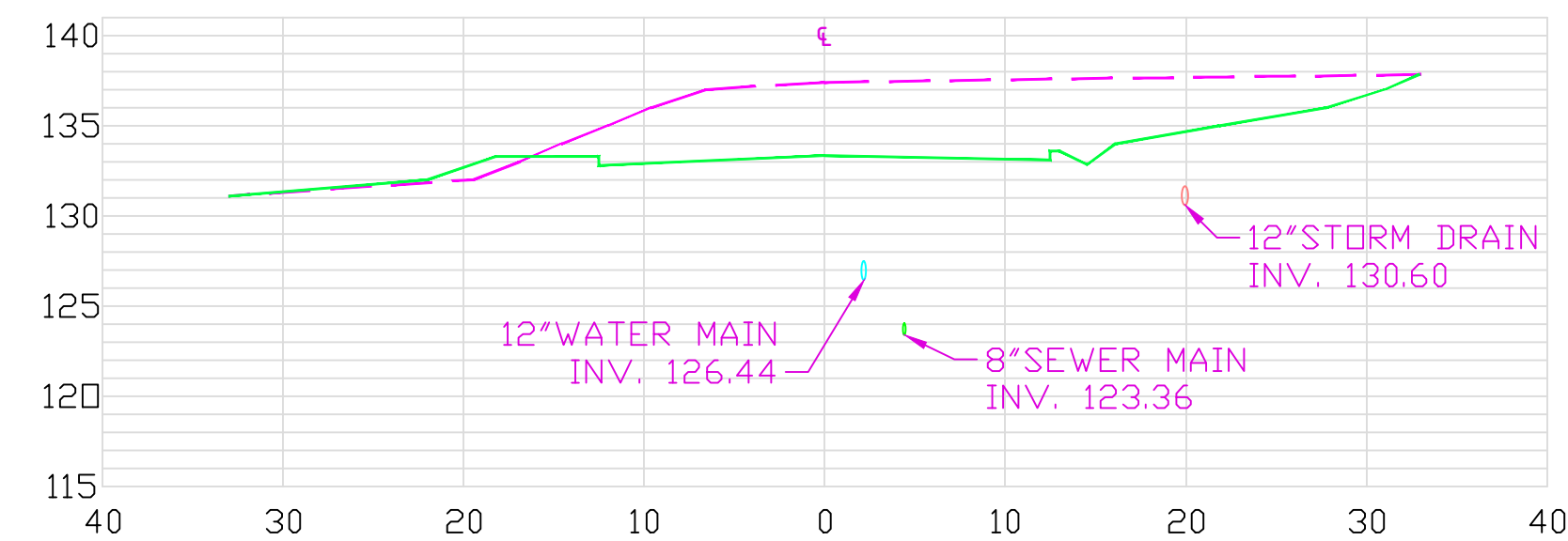
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PRDP. CL ELEV 130.3



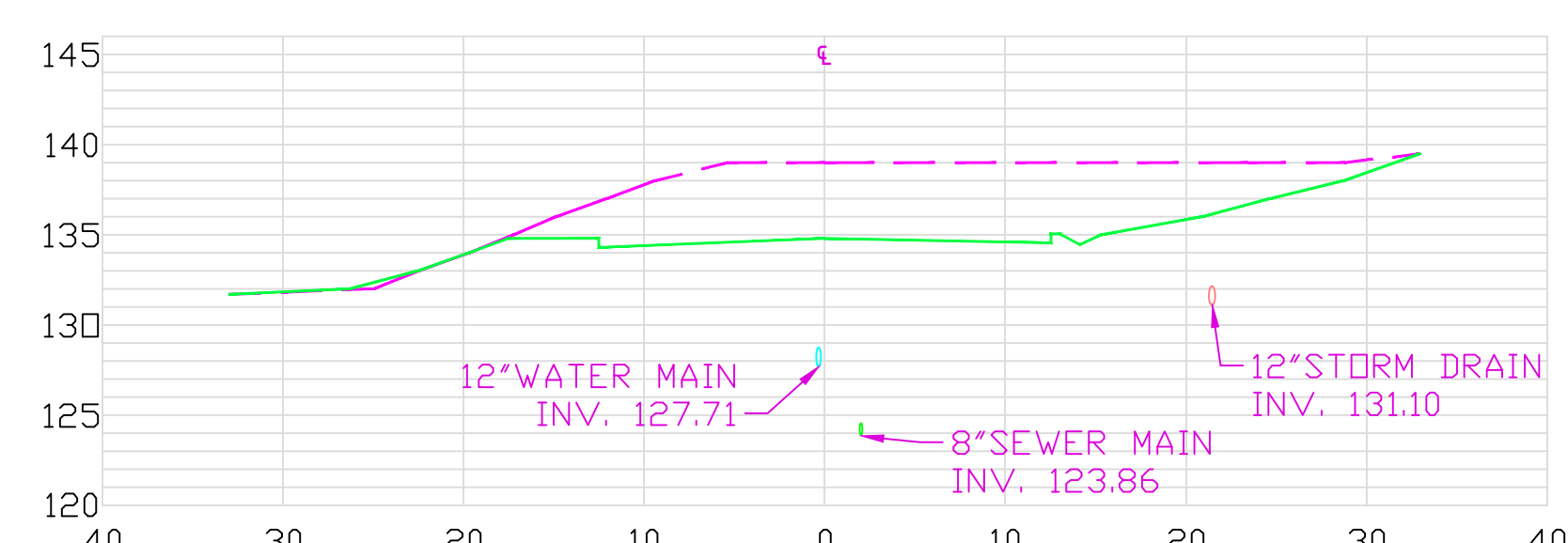
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PRDP. CL ELEV 131.05



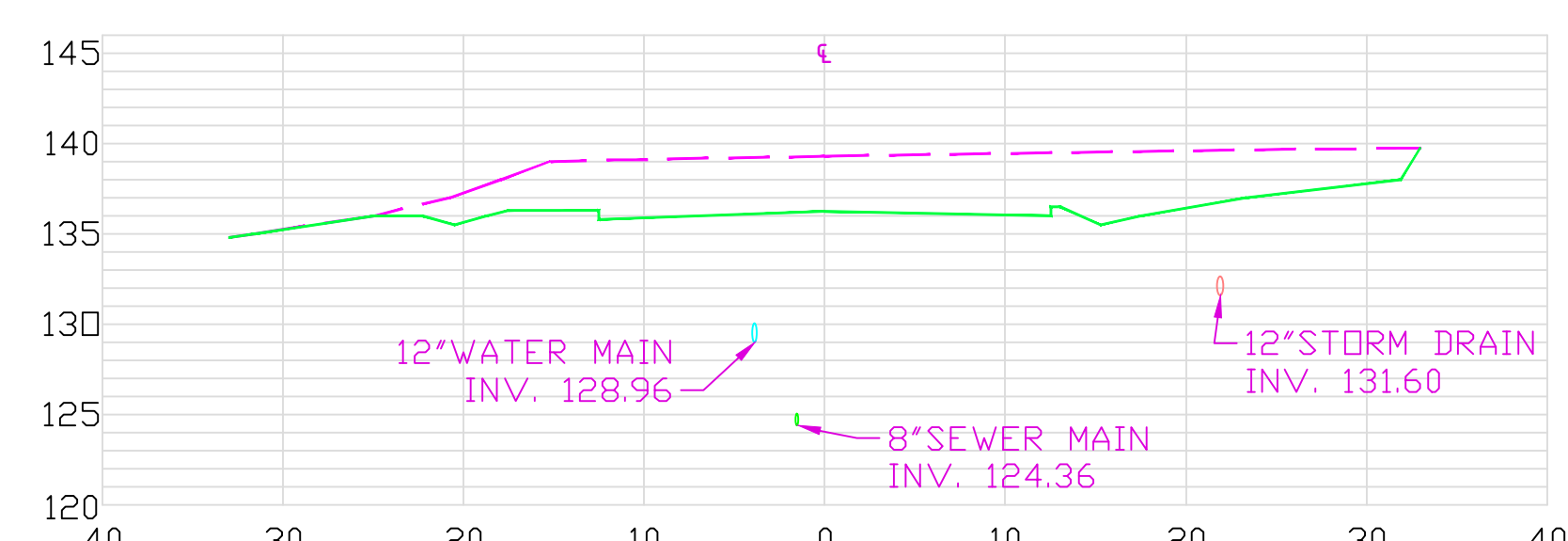
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STATION 2+25
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PRDP. CL ELEV 133.3



STATION 2+50
EXIST. CL ELEV 139.0
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STATION 2+75
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PRDP. CL ELEV 136.25

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

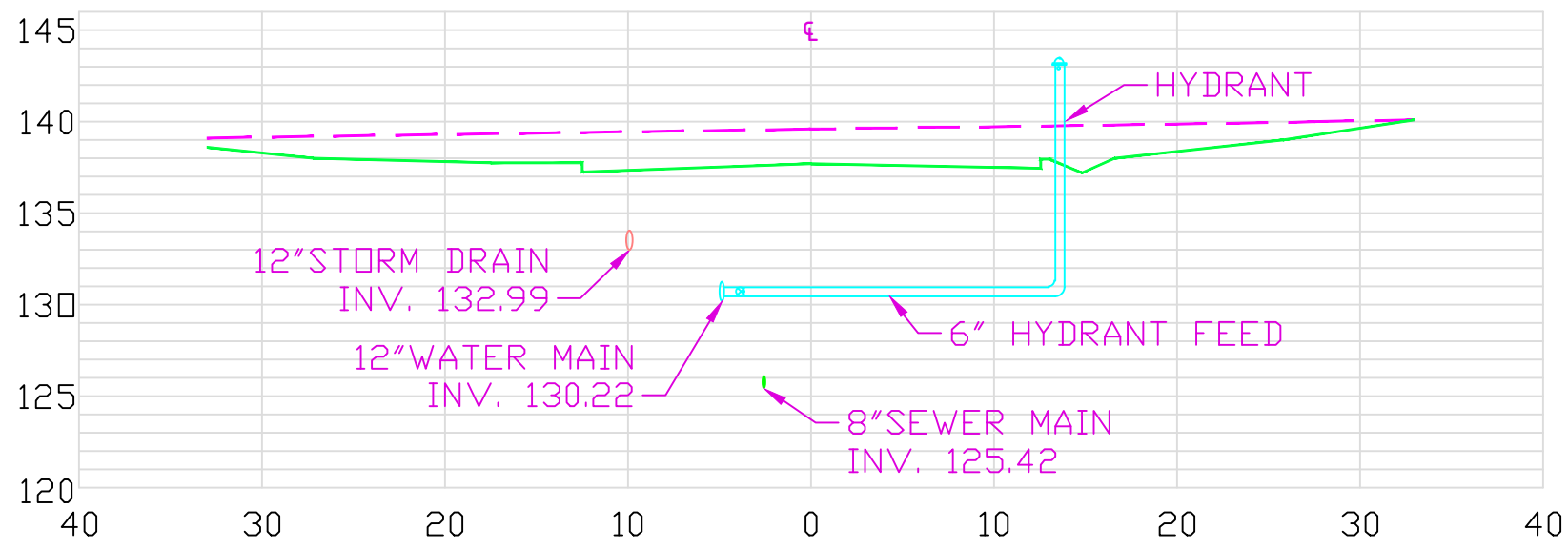
No.	Revision/Issue	Date
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Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

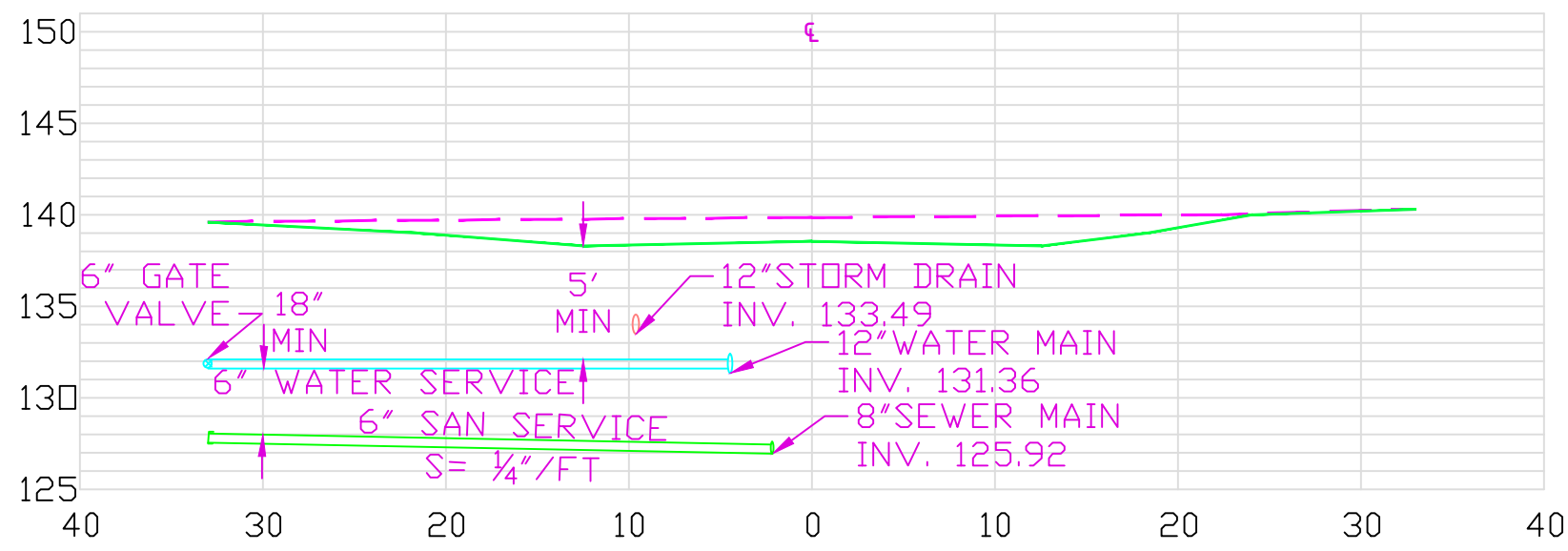
Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
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207-667-6551
mccengr@gmail.com

SECTIONS
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

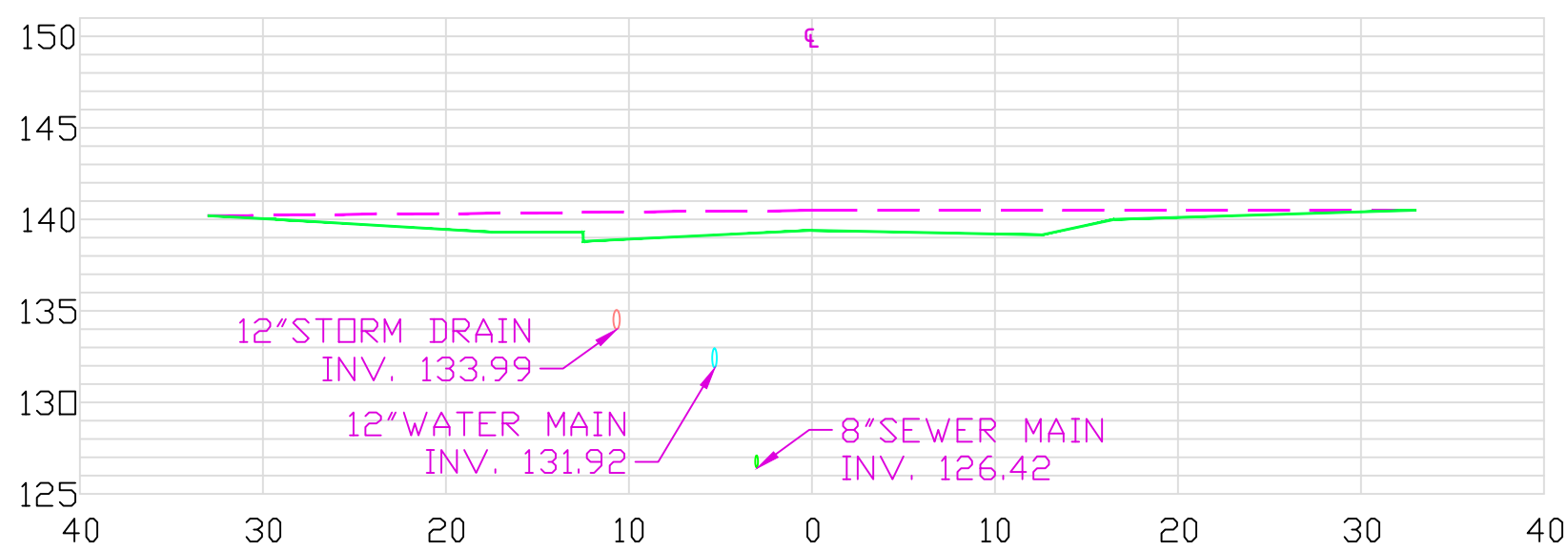
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Date 10/30/25	
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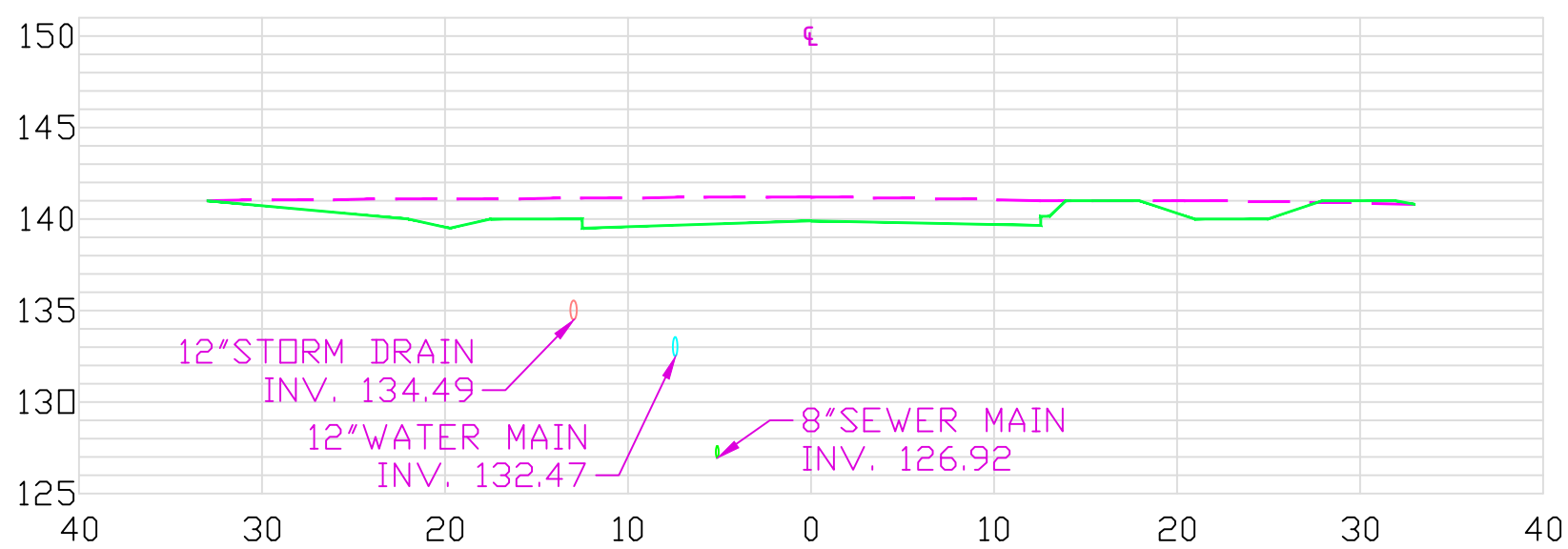
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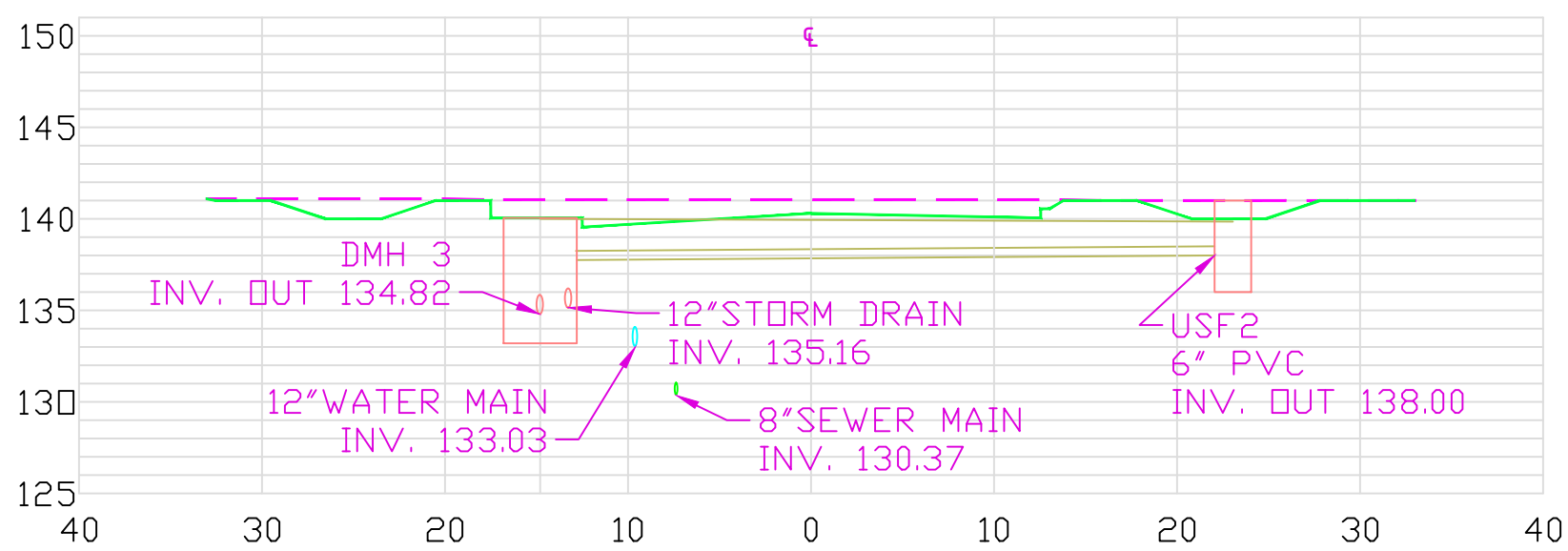
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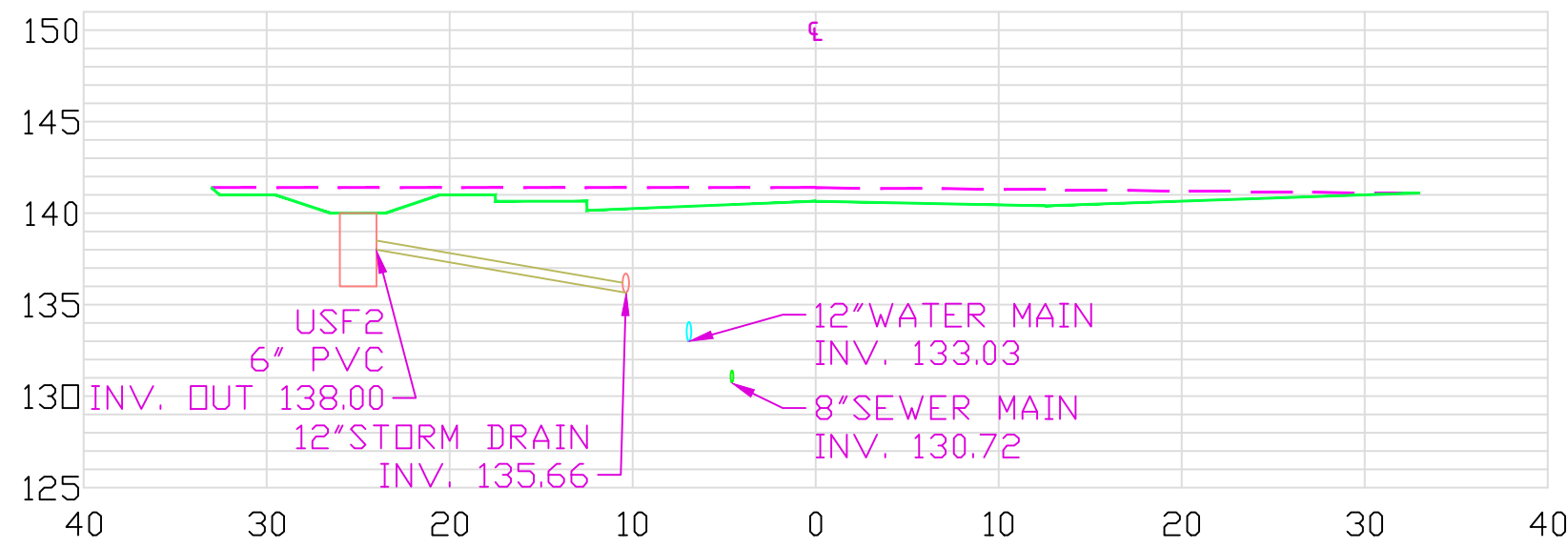
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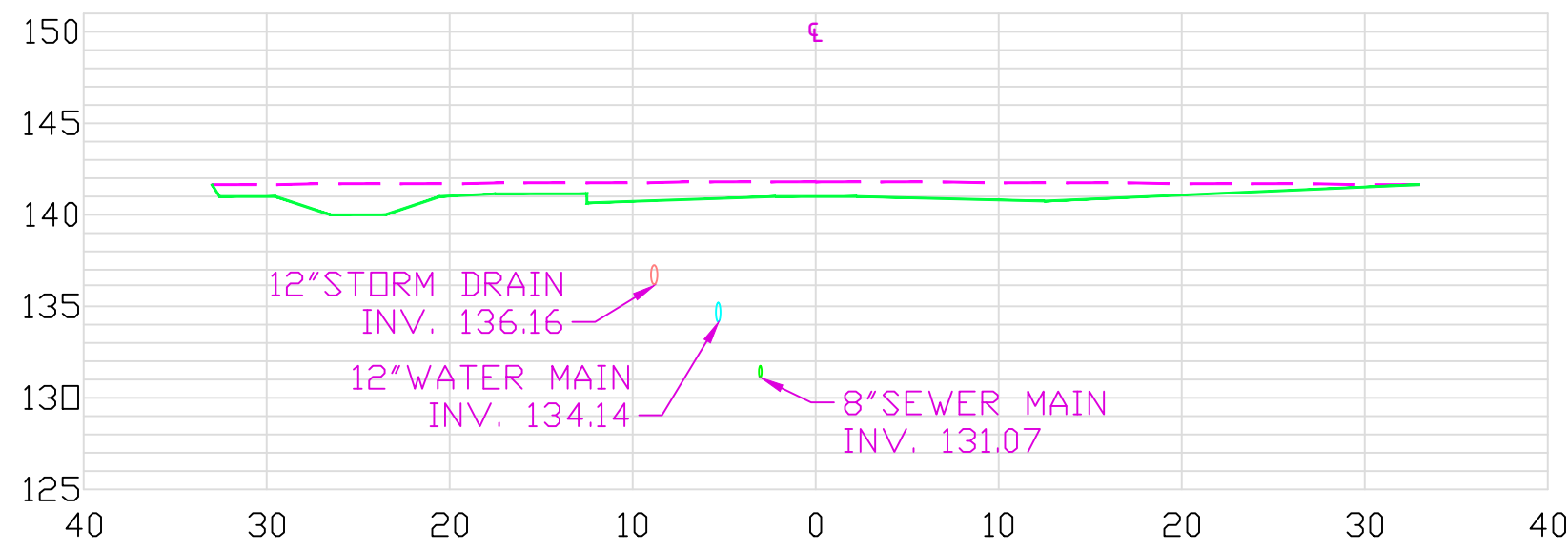
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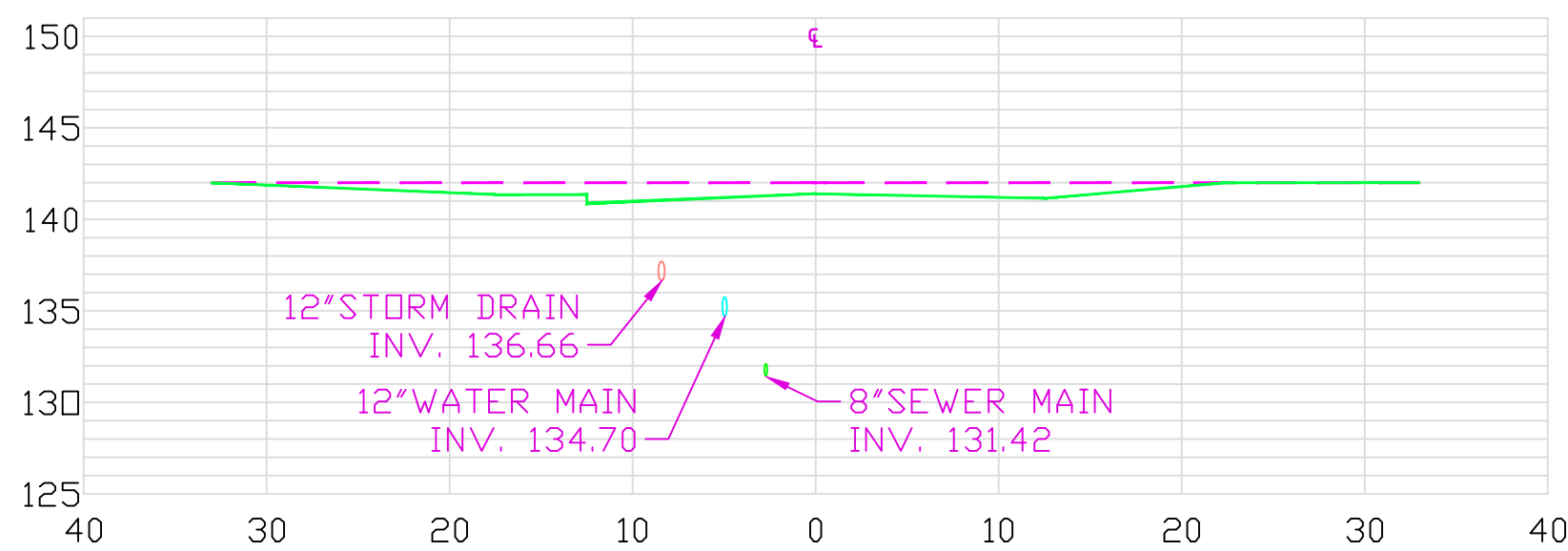
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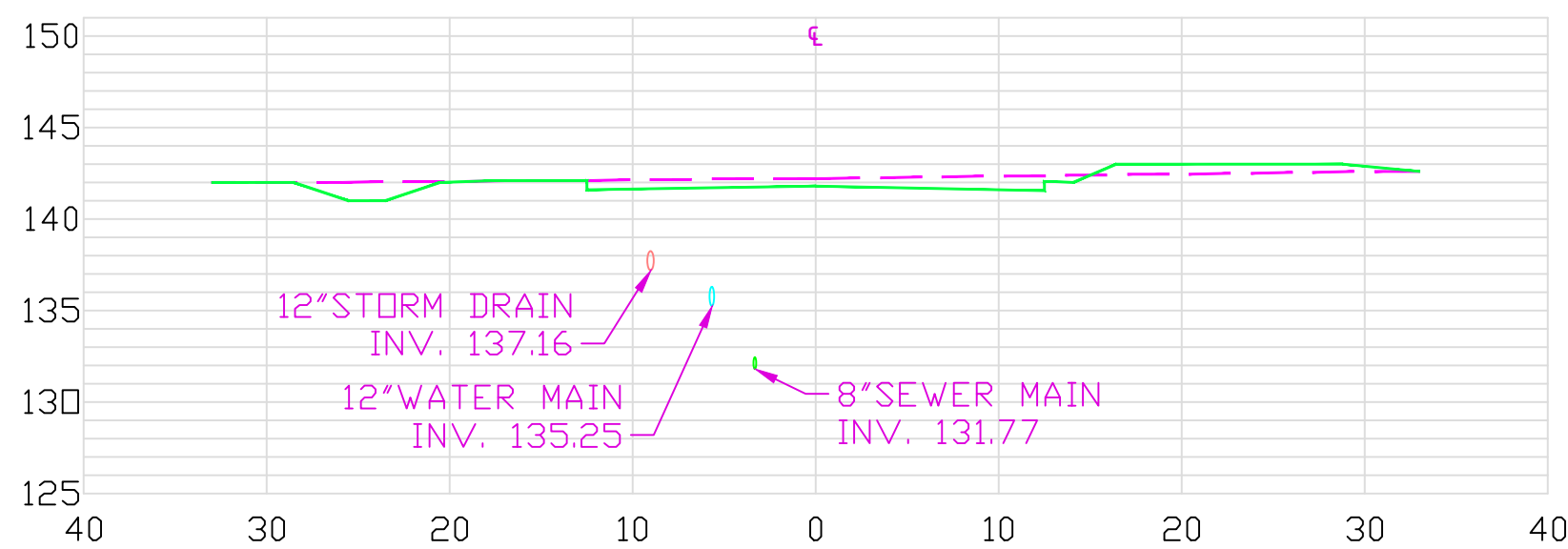
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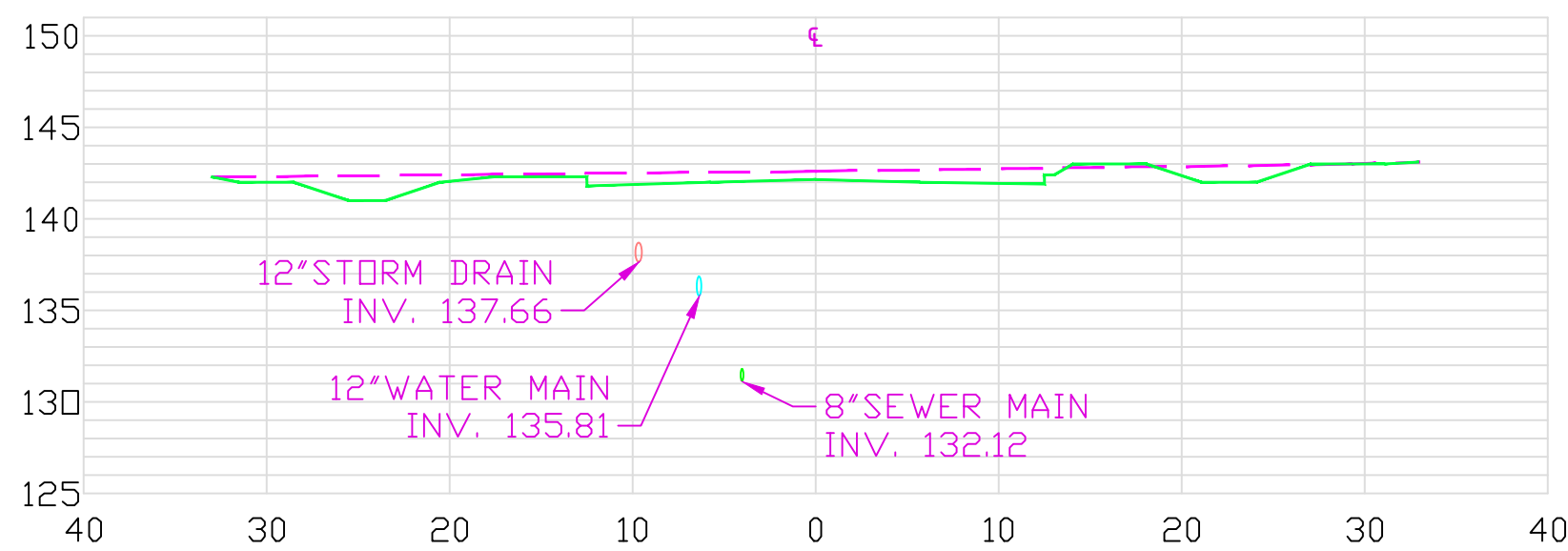
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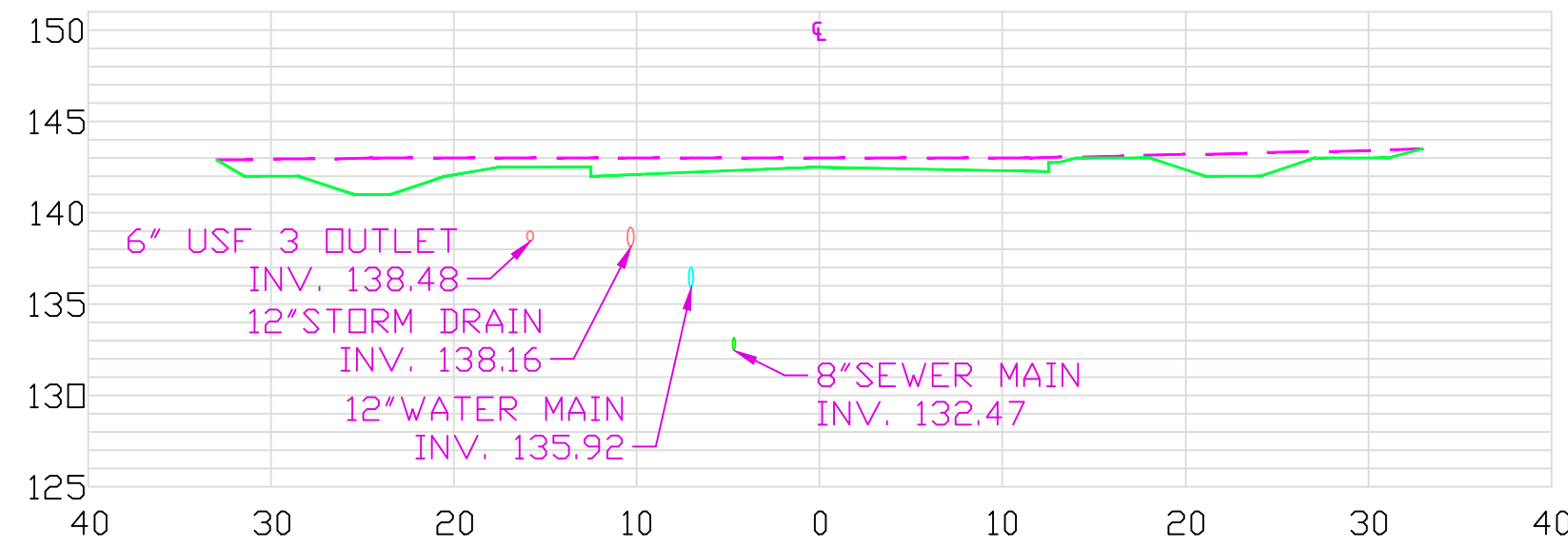
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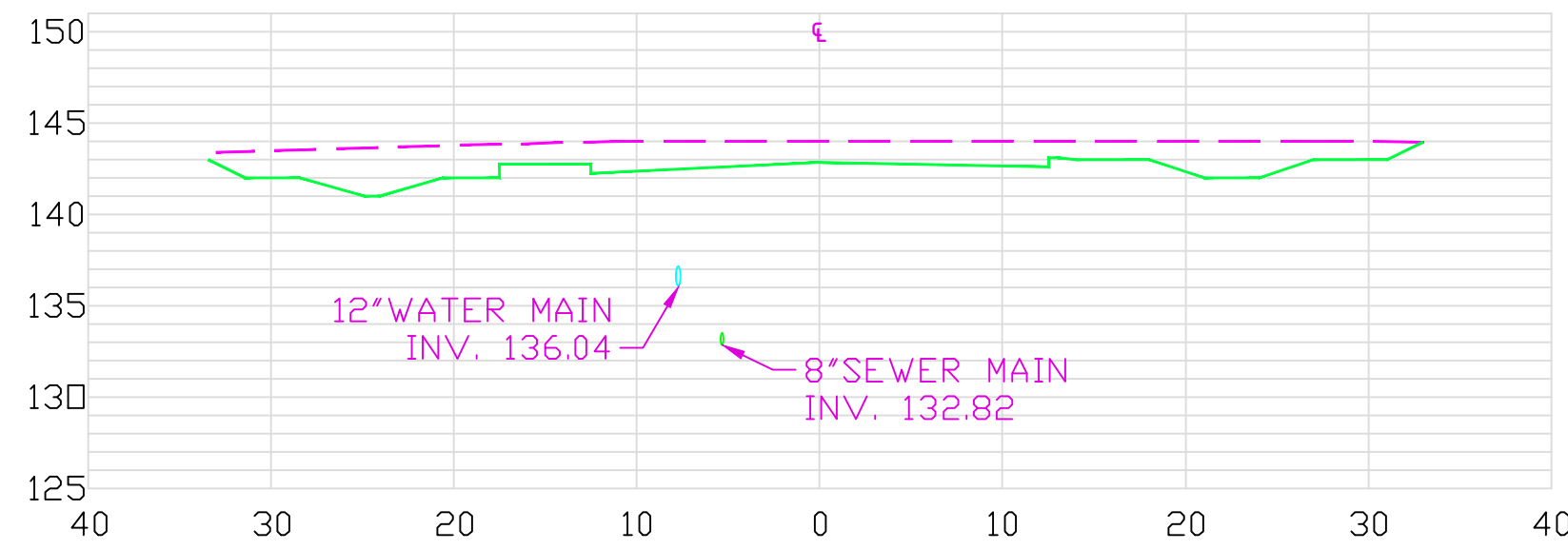
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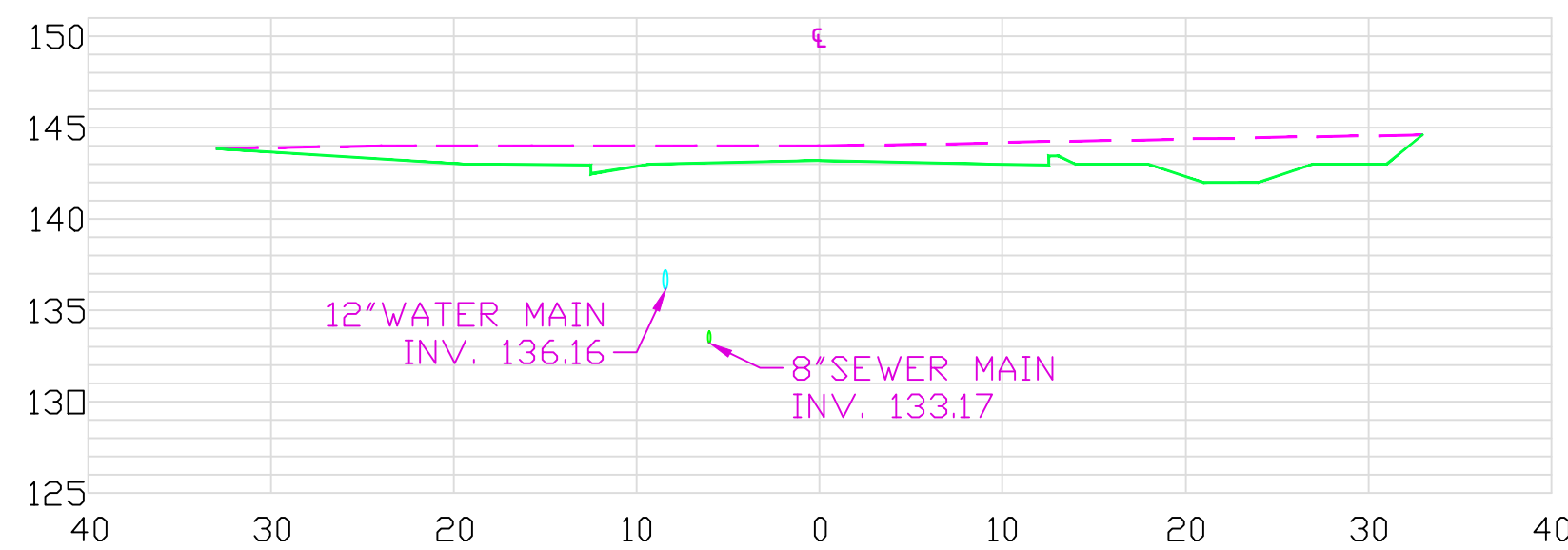
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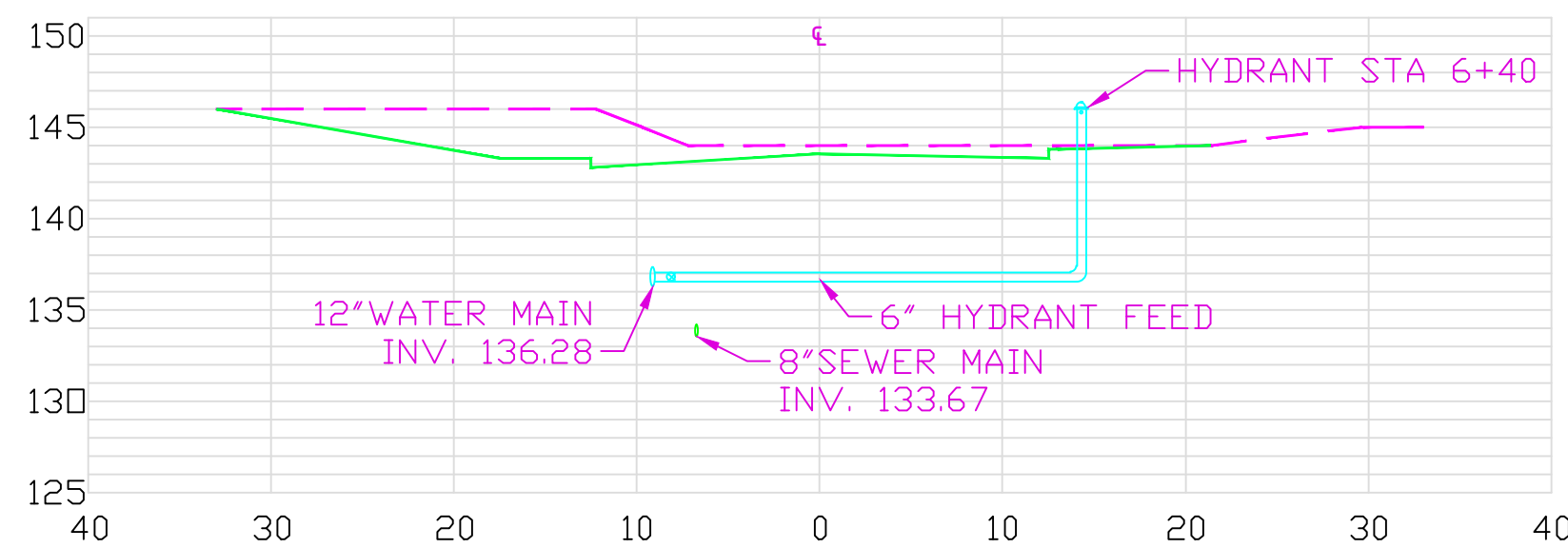
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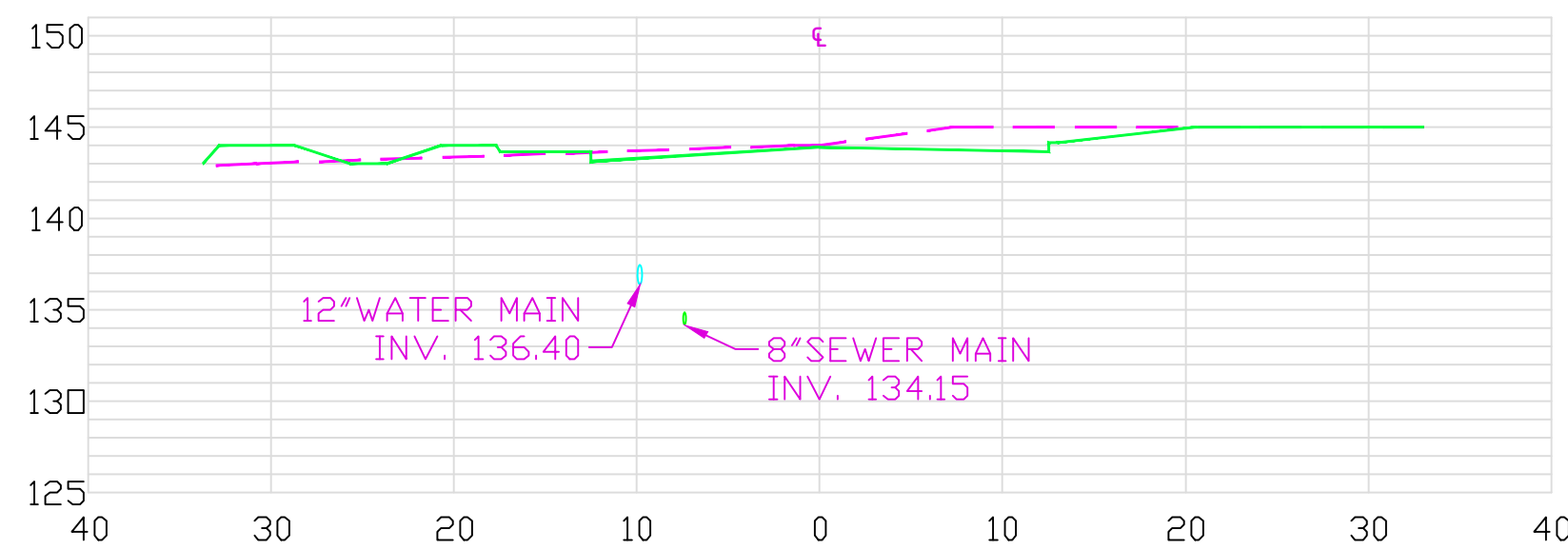
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STATION 6+00
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PROP. CL ELEV 143.2



STATION 6+25
EXIST. CL ELEV 144.0
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STATION 6+50
EXIST. CL ELEV 144.0
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General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

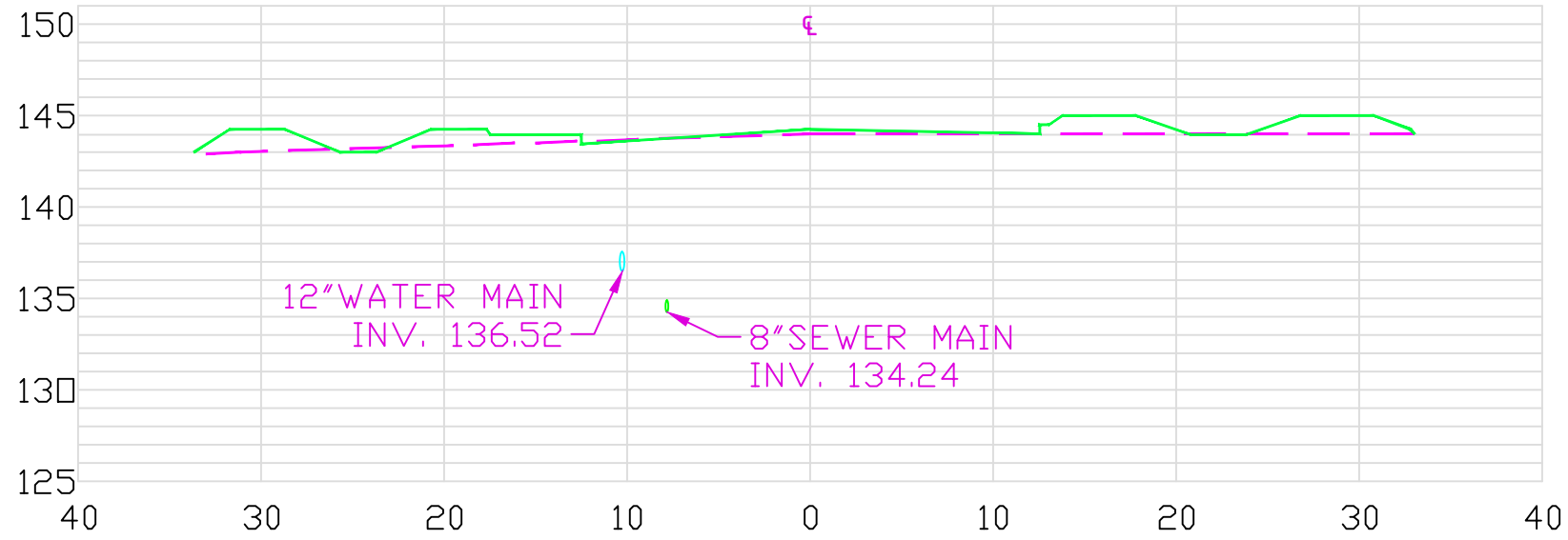
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

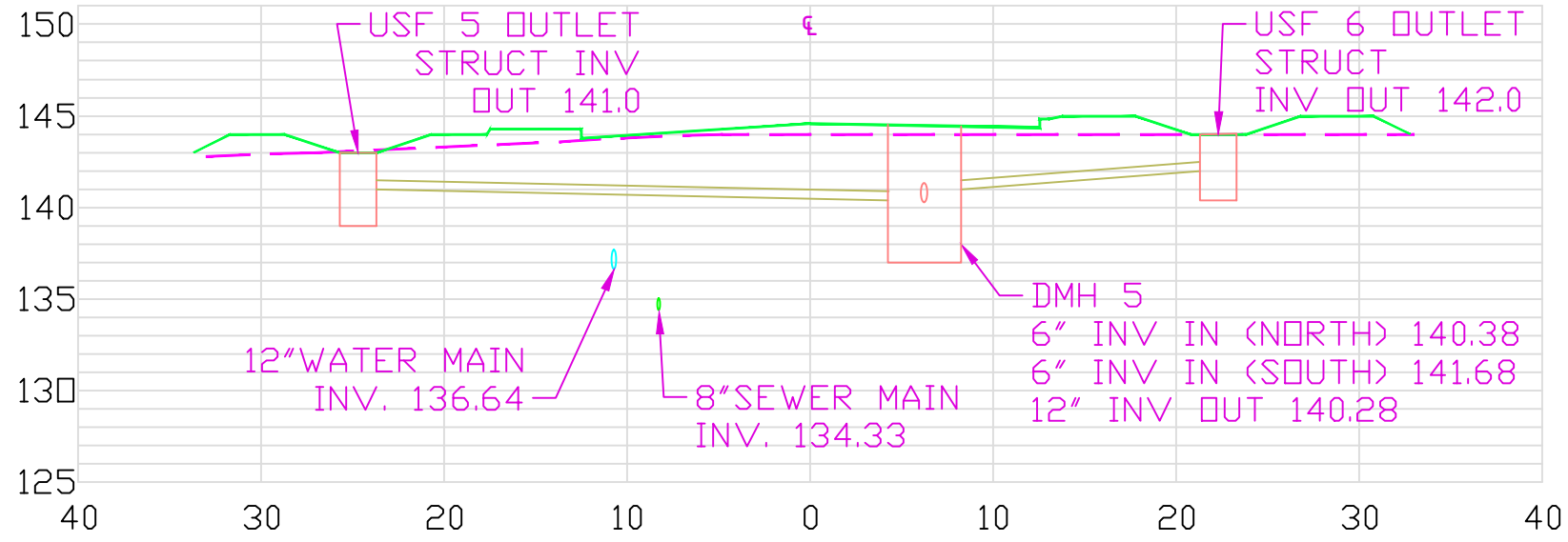
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SECTIONS
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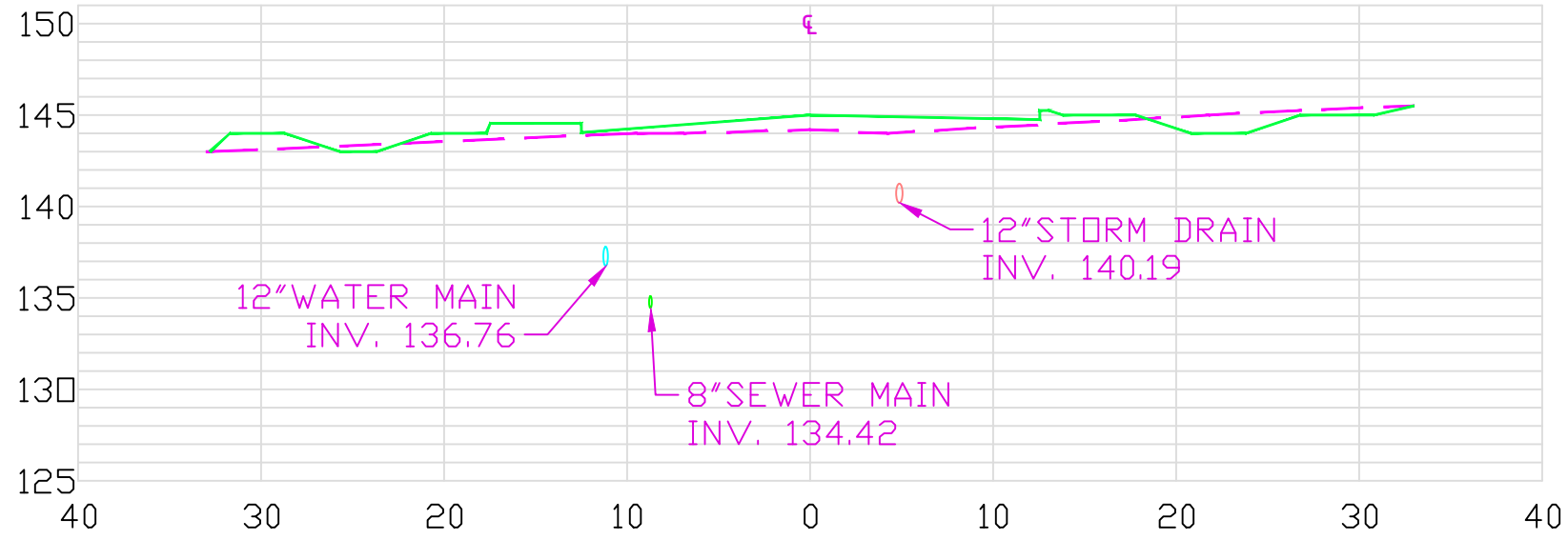
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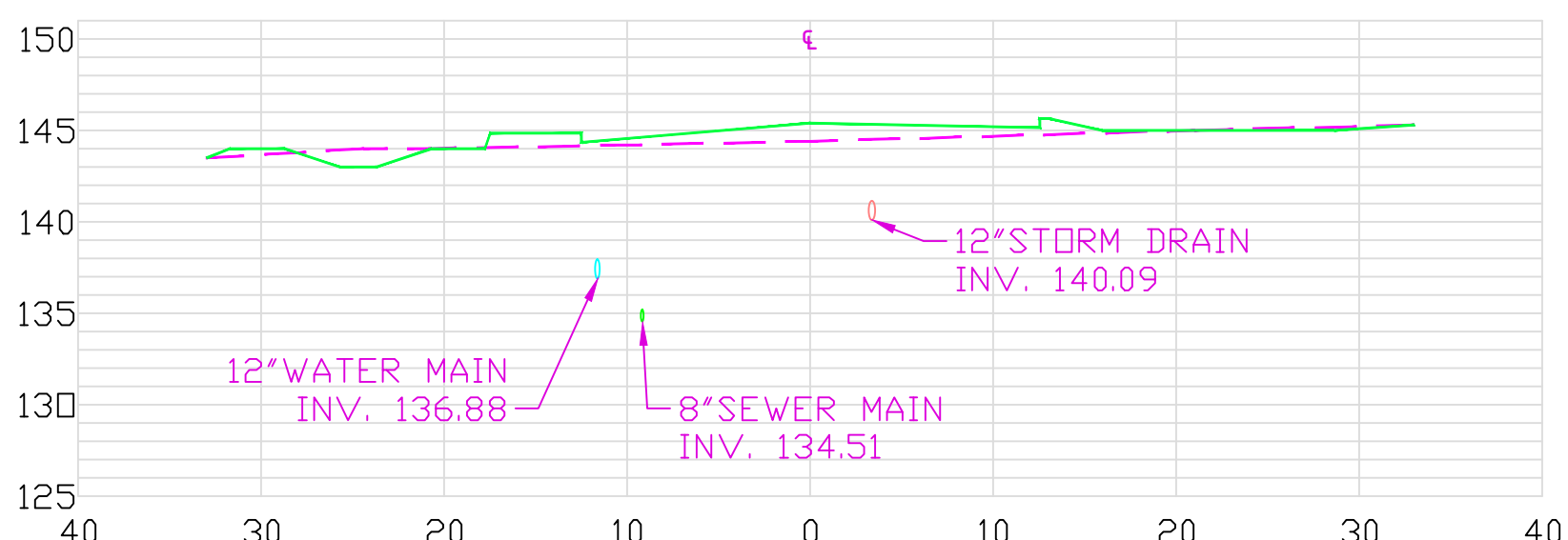
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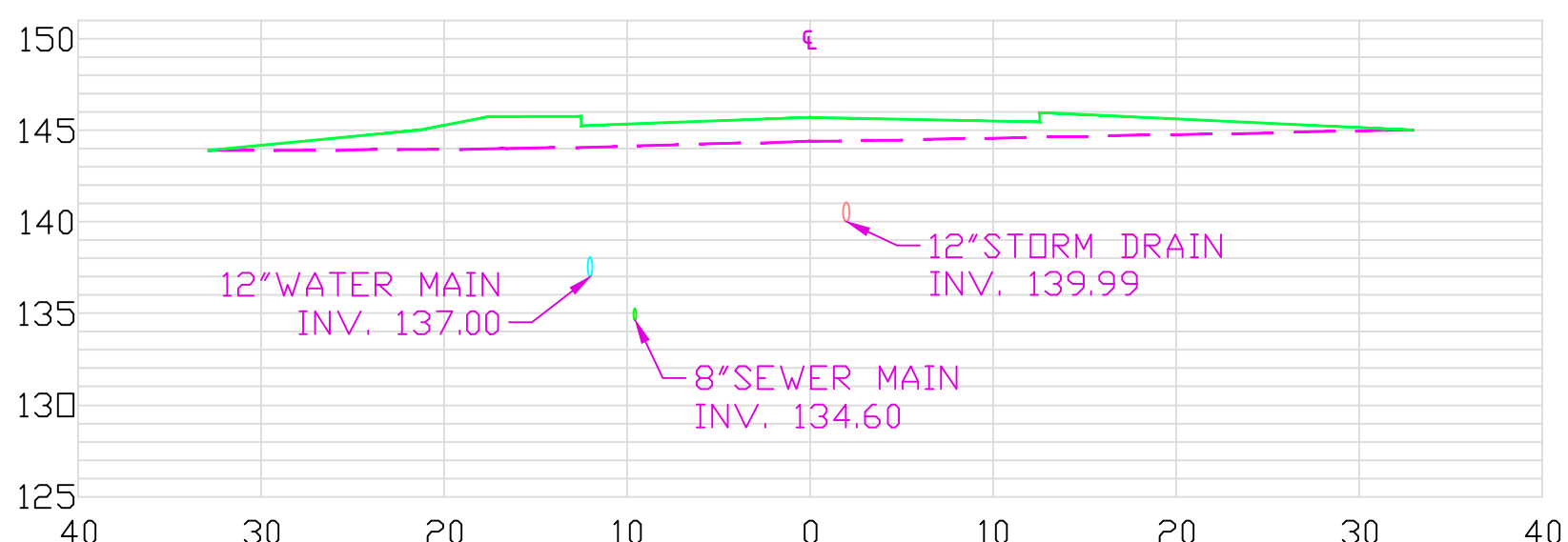
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PROP. CL ELEV 144.6



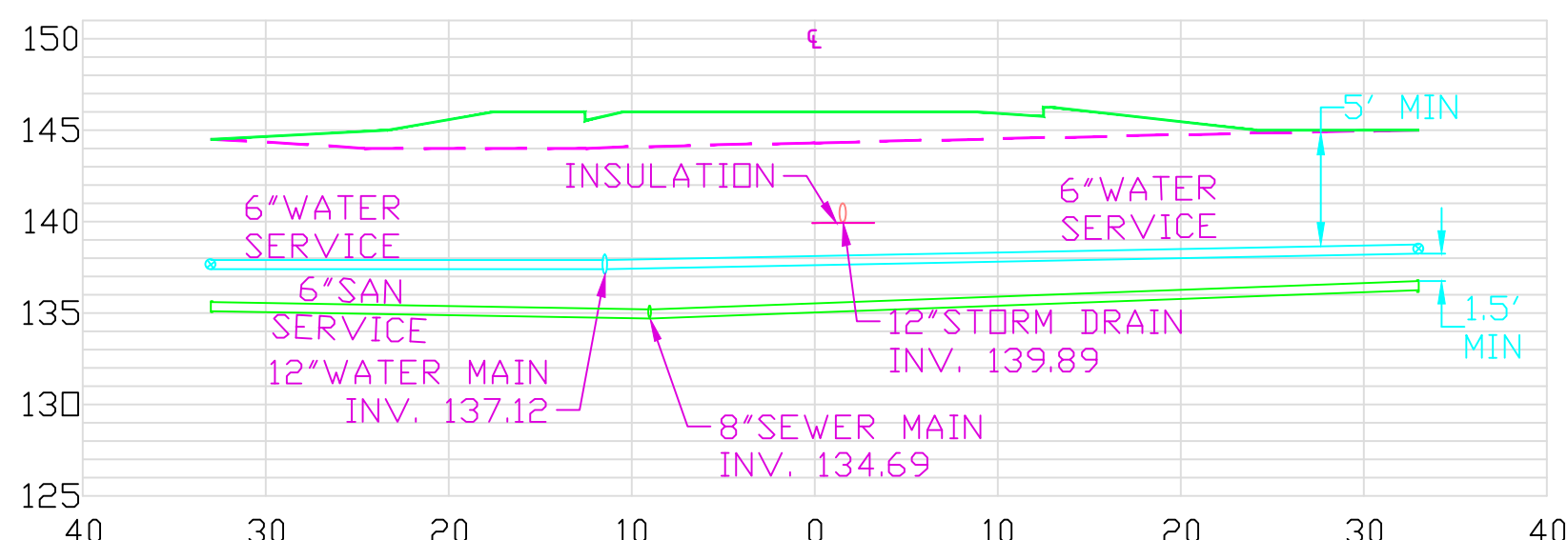
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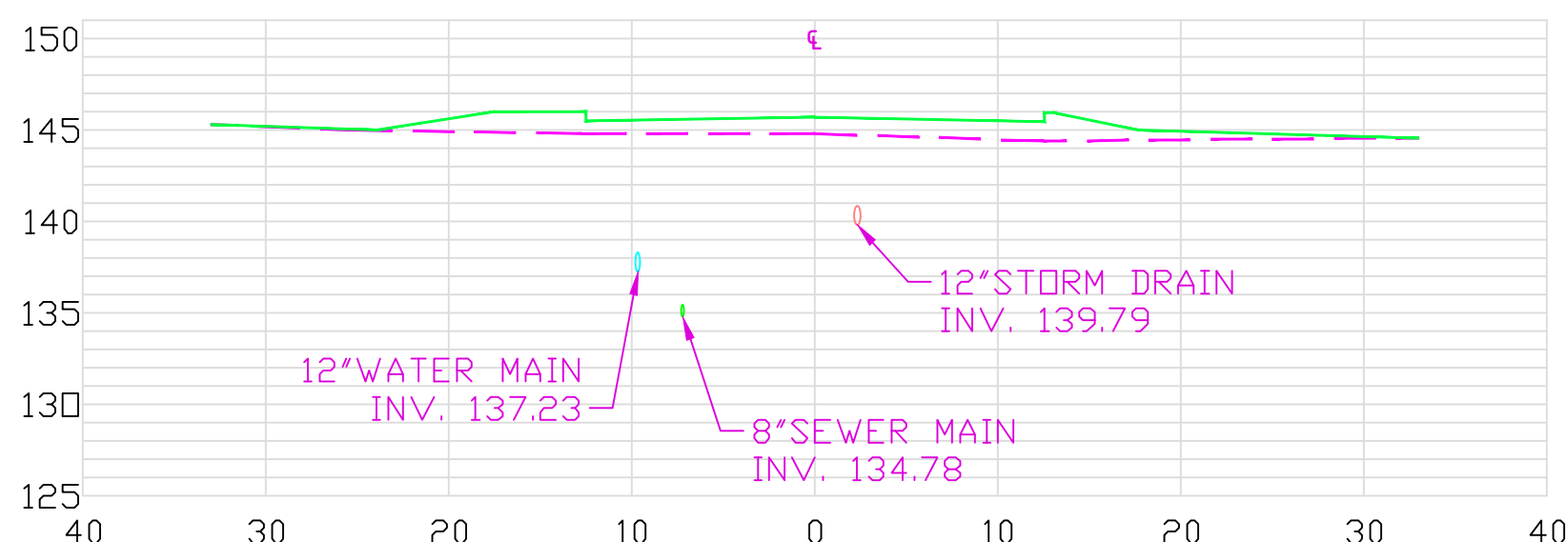
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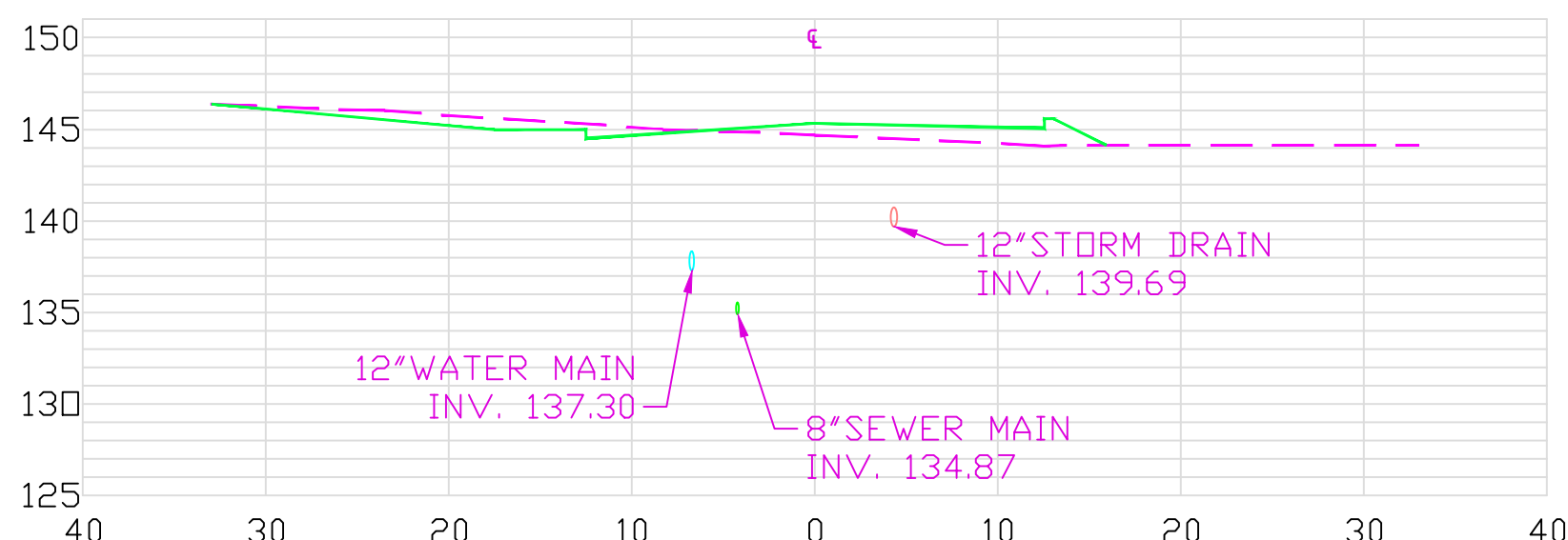
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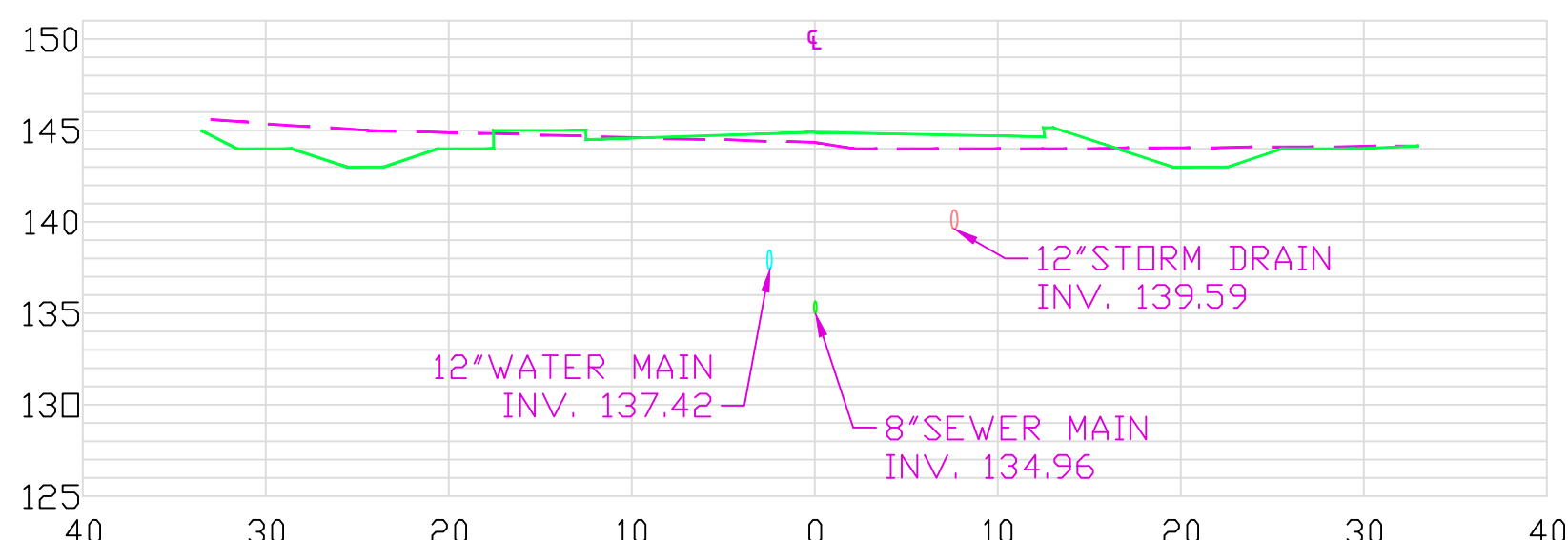
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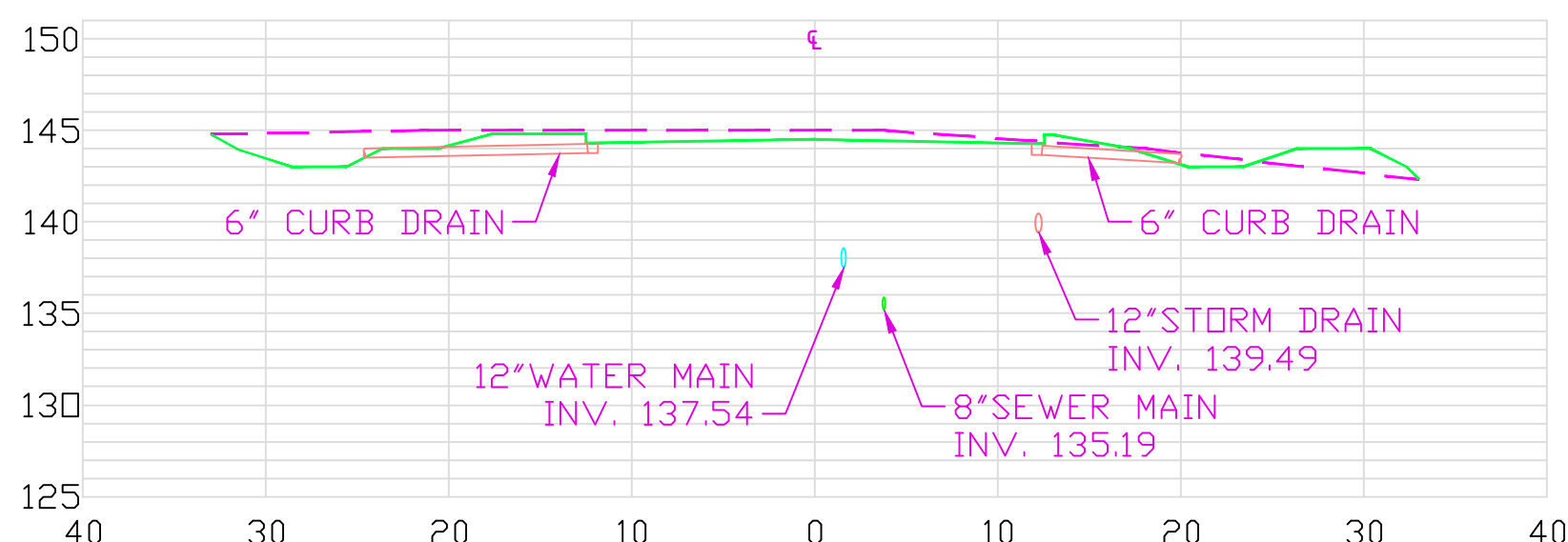
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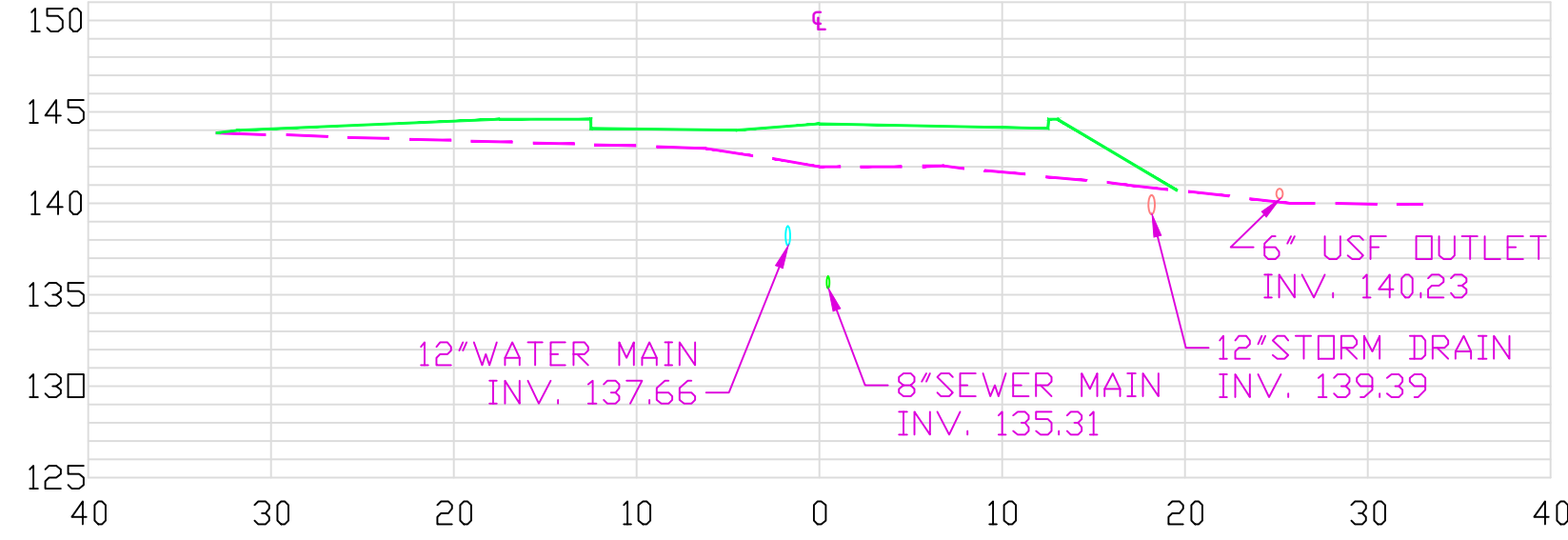
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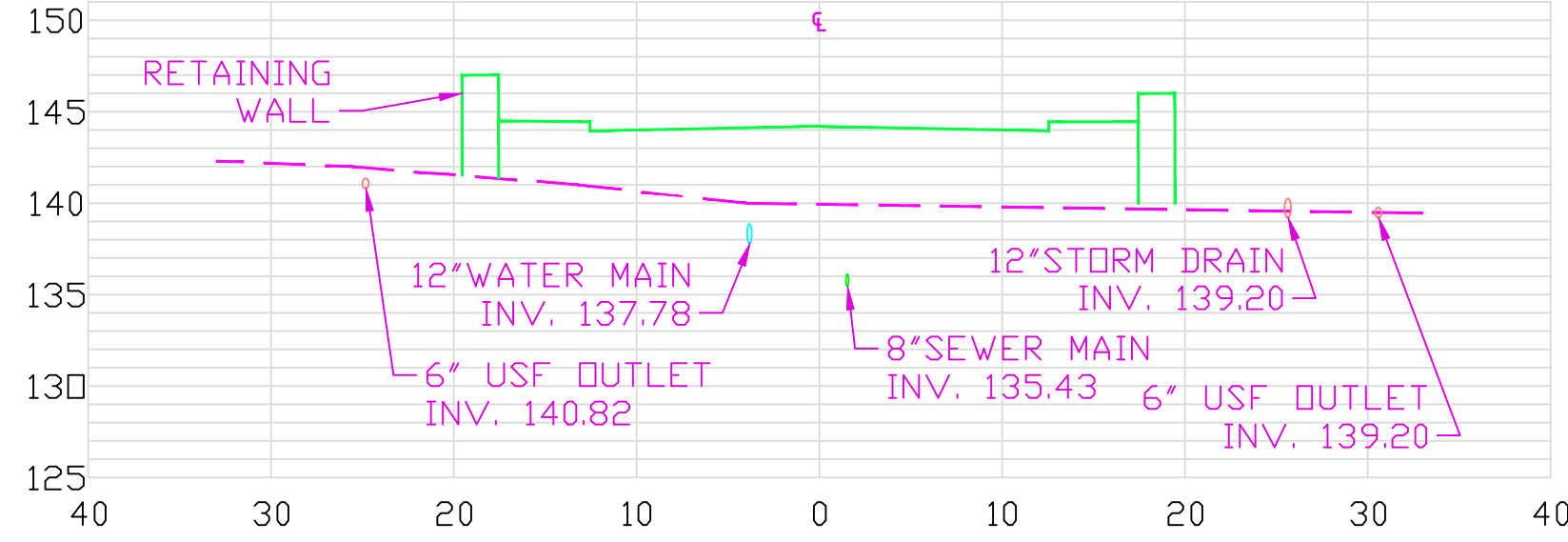
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PROP. CL ELEV 144.9



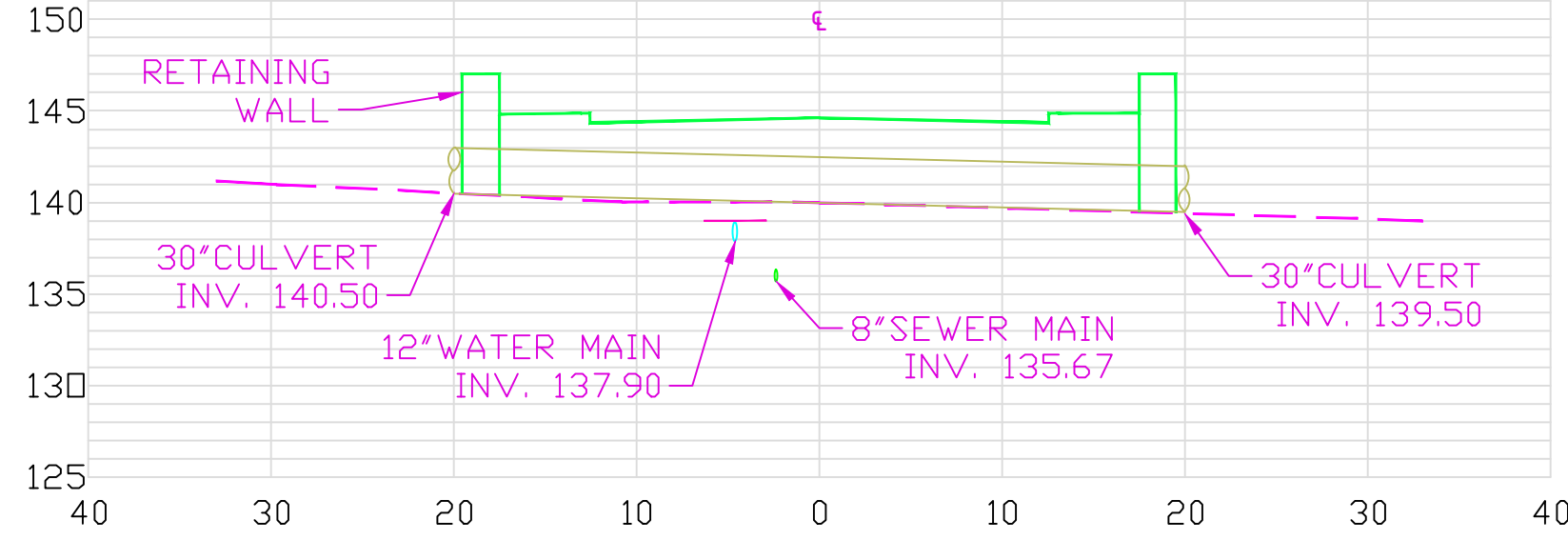
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PROP. CL ELEV 144.5



STATION 9+25
EXIST. CL ELEV 142.0
PROP. CL ELEV 144.35



STATION 9+50
EXIST. CL ELEV 140.0
PROP. CL ELEV 144.2



STATION 9+75
EXIST. CL ELEV 140.0
PROP. CL ELEV 144.6

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

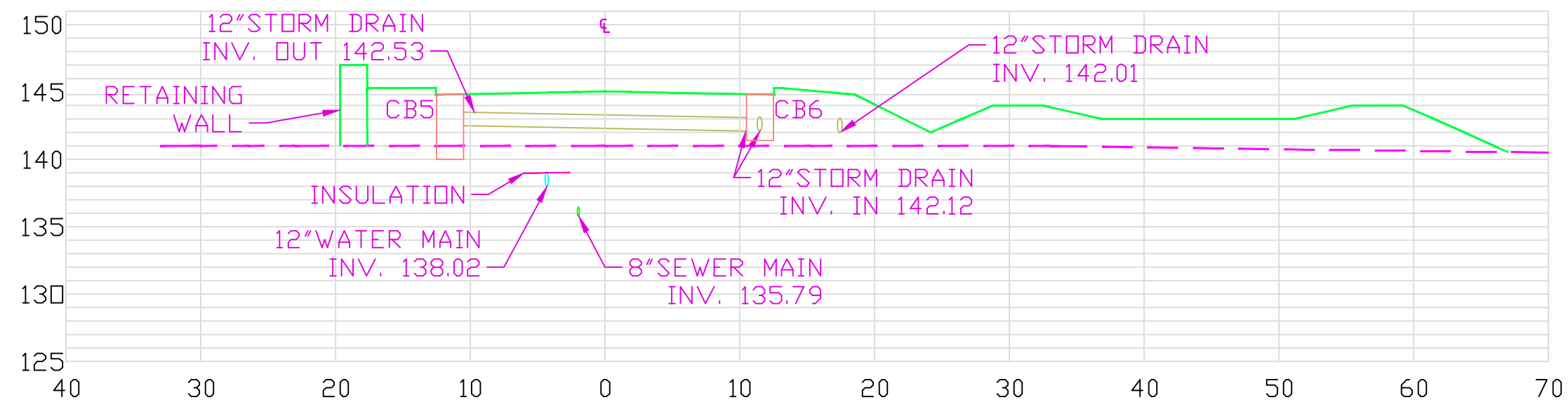
No.	Revision/Issue	Date

Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

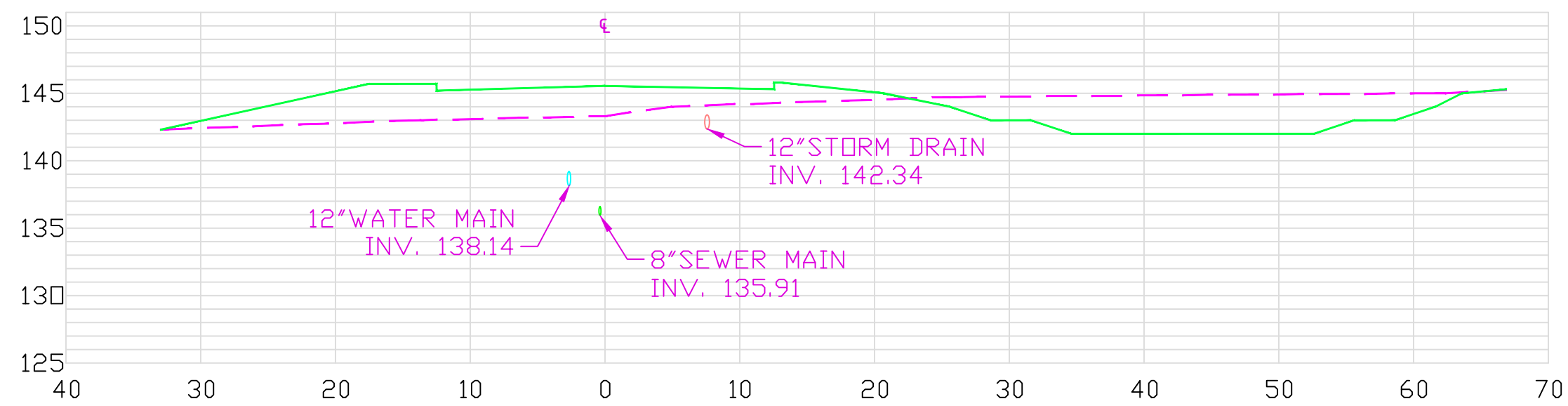
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SECTIONS
MERRILL LANE EXTENSION
Prepared For:
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1 City Hall Plaza
Ellsworth, Maine

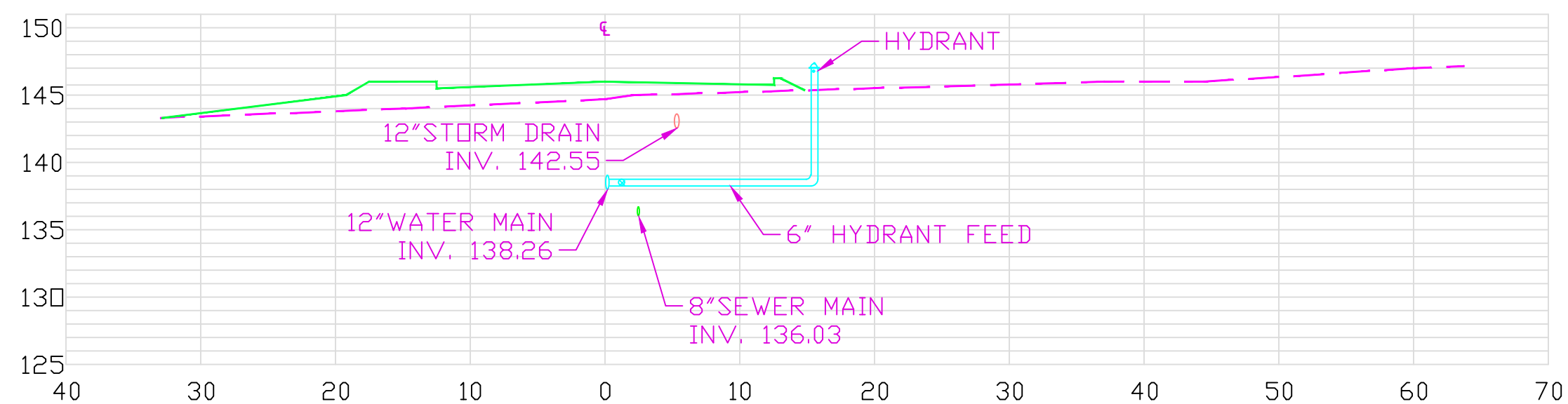
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6508	C-1.15
Date	10/30/25
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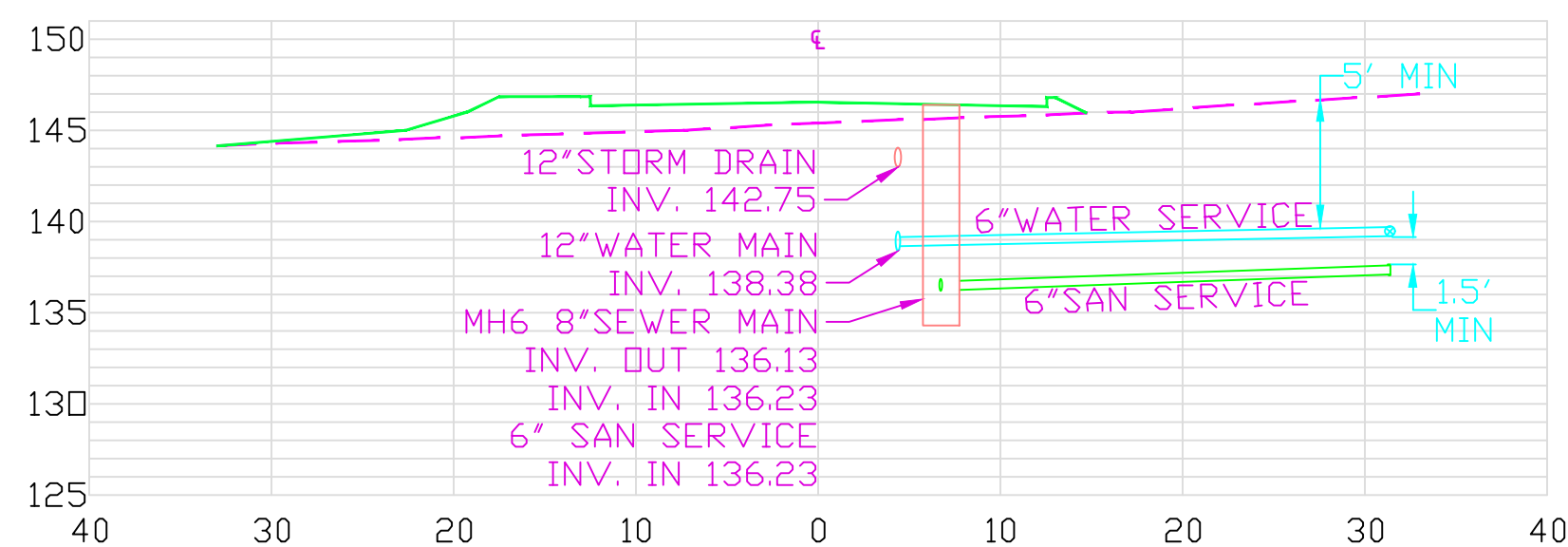
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PROP. CL ELEV 145.04



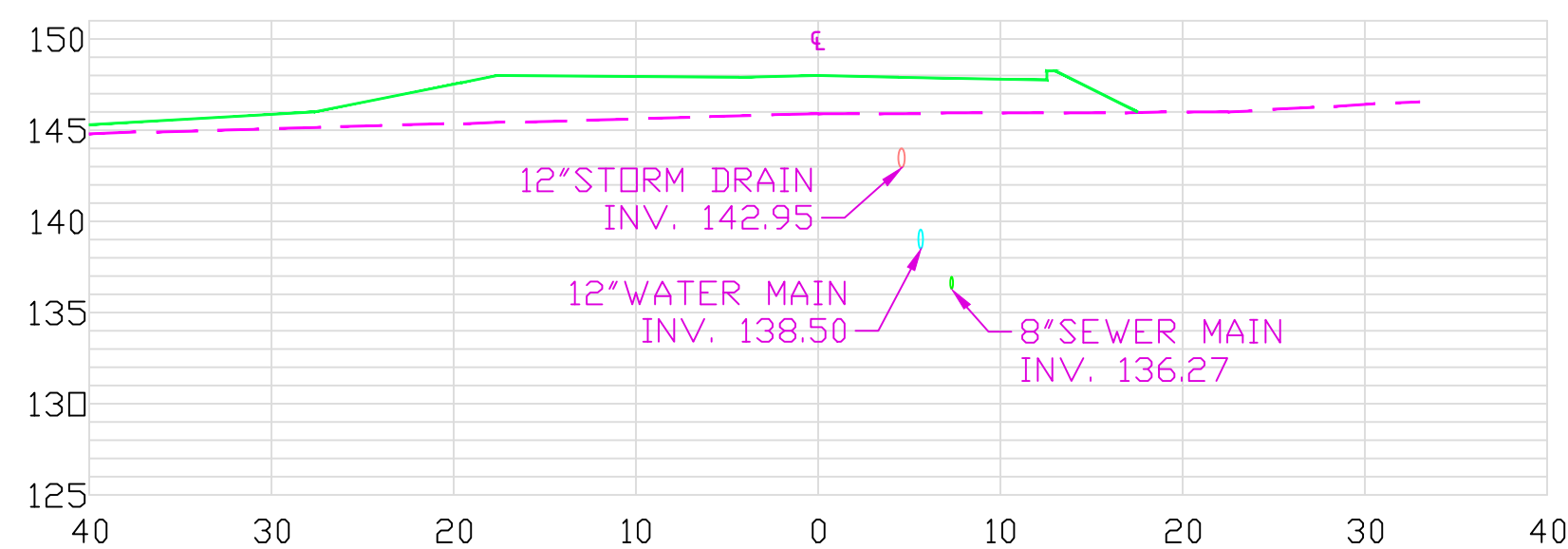
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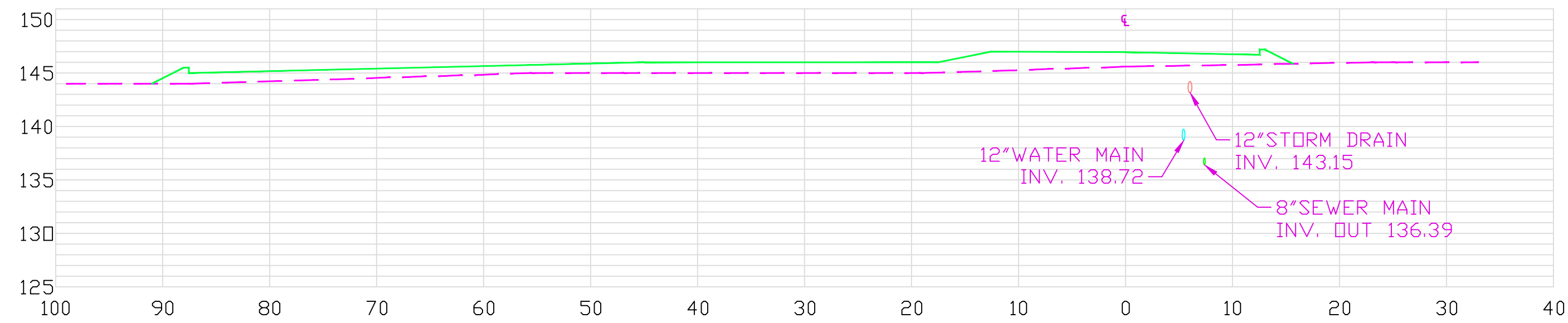
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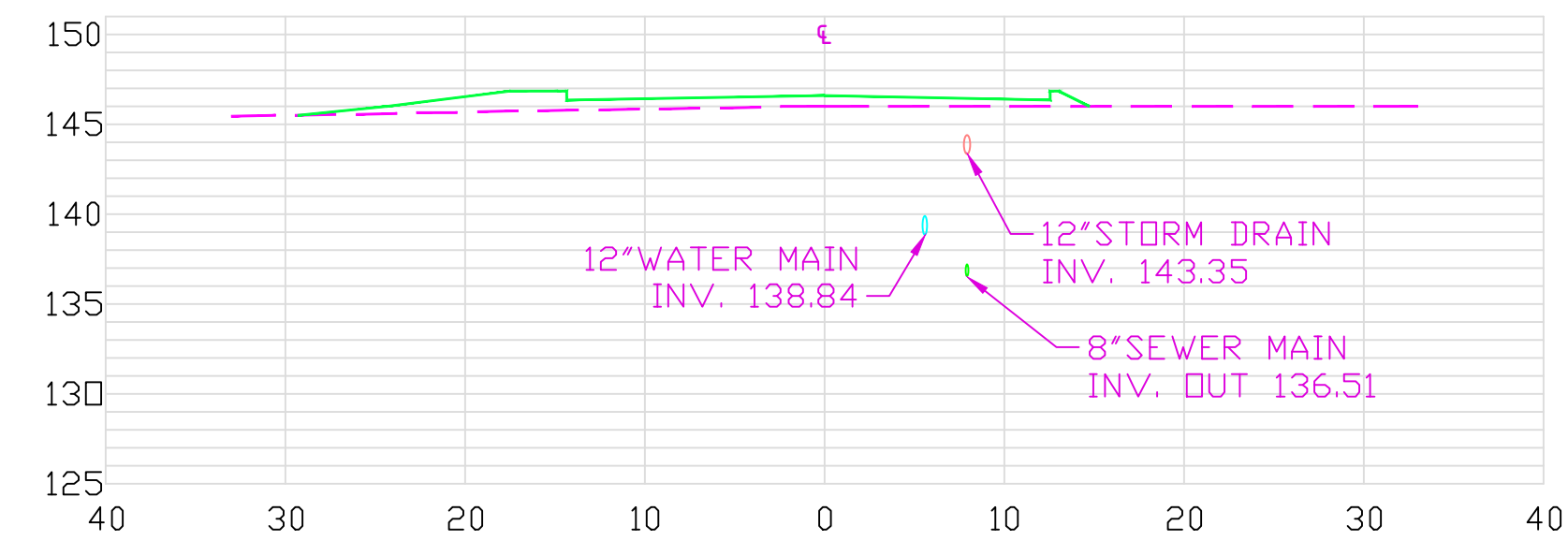
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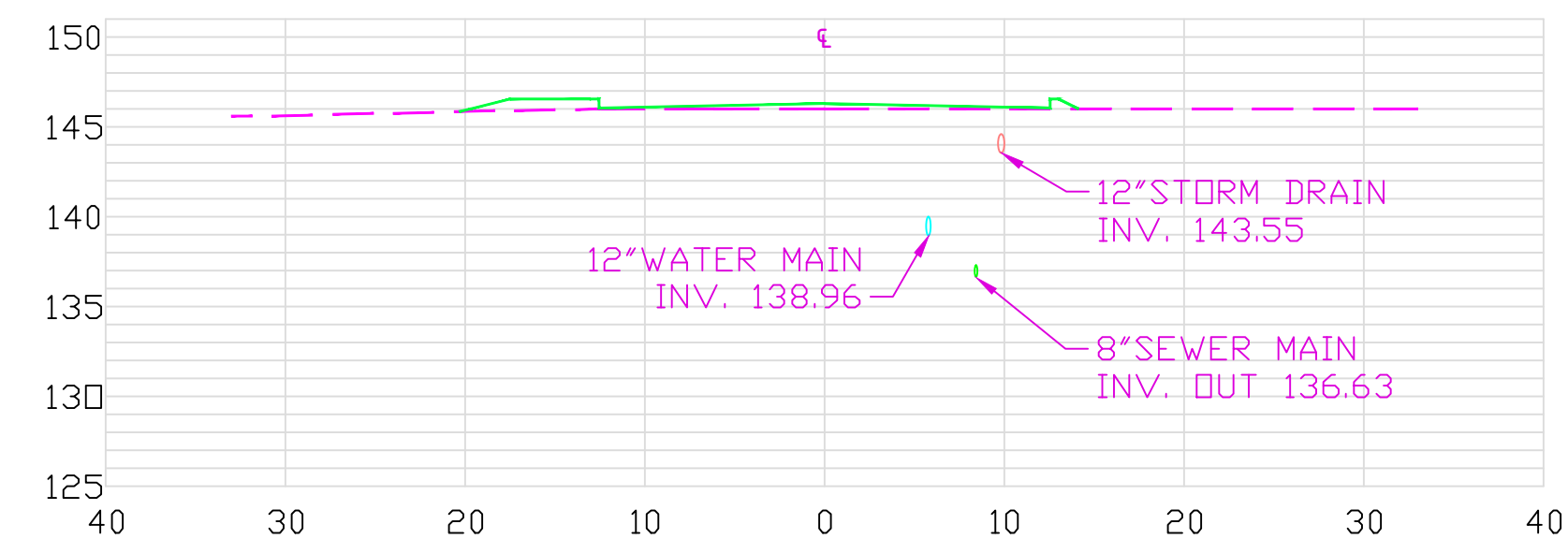
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PROP. CL ELEV 147.0



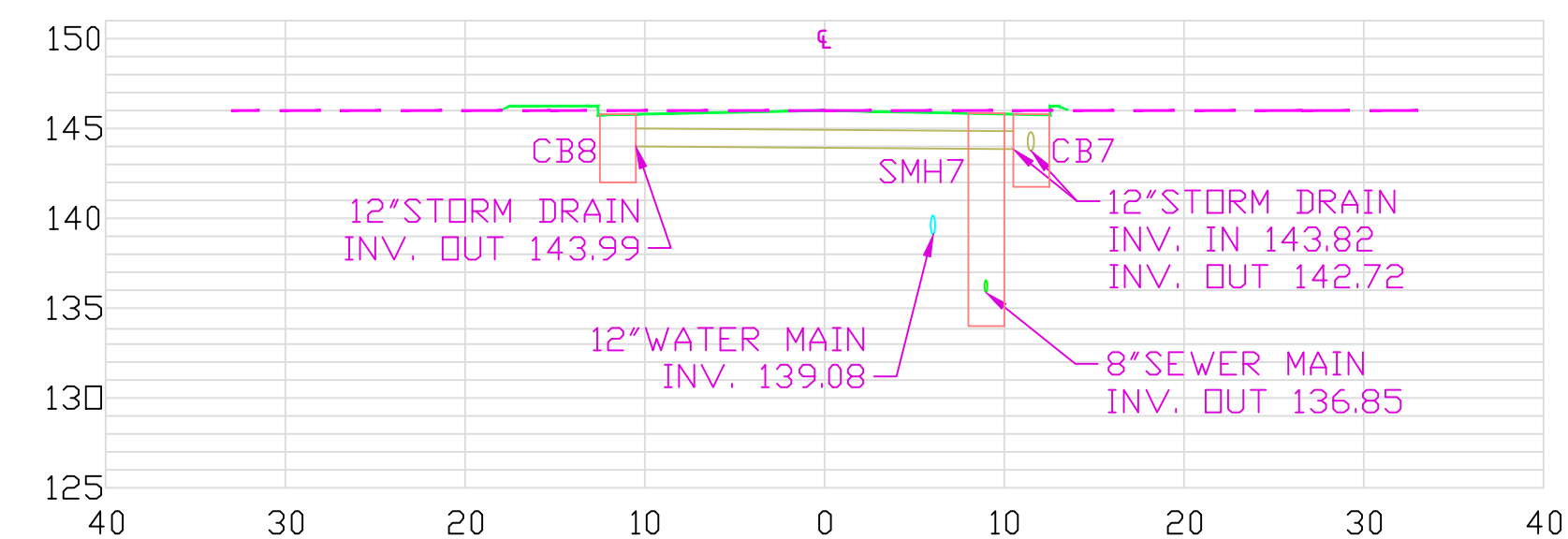
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PROP. CL ELEV 146.9



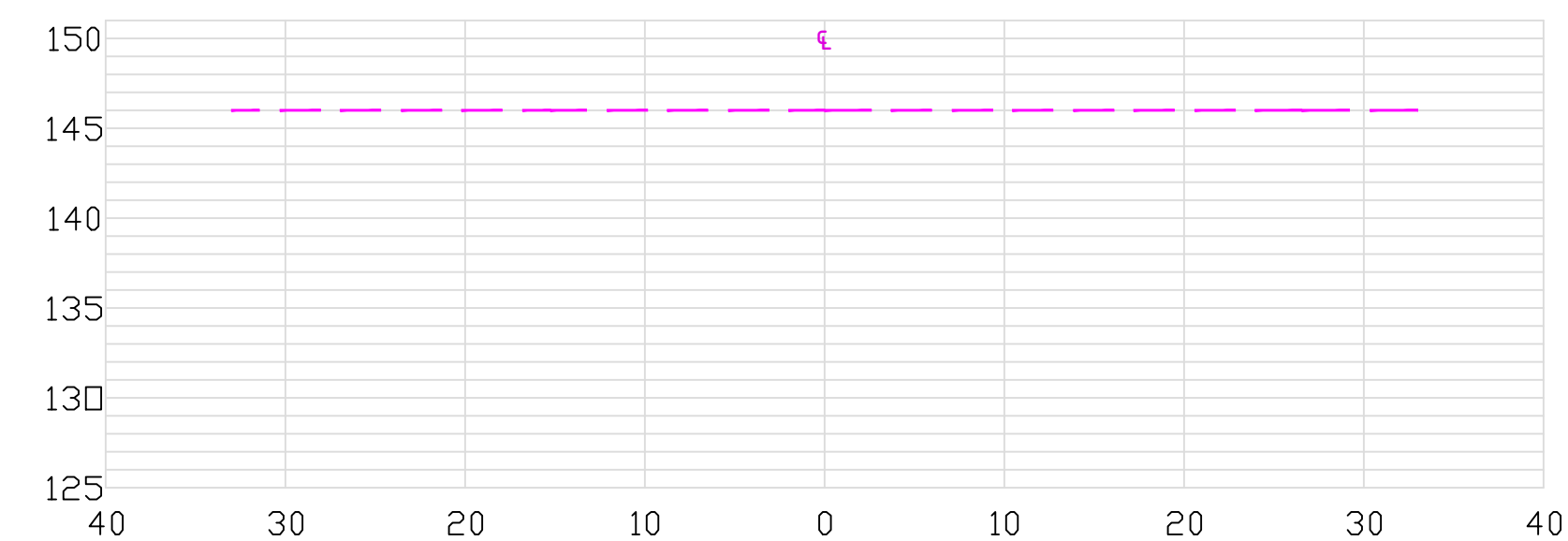
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PROP. CL ELEV 146.6



STATION 11+75
EXIST. CL ELEV 146.0
PROP. CL ELEV 146.3



STATION 12+00
EXIST. CL ELEV 146.0
PROP. CL ELEV 146.0



STATION 12+25
EXIST. CL ELEV 146.0

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

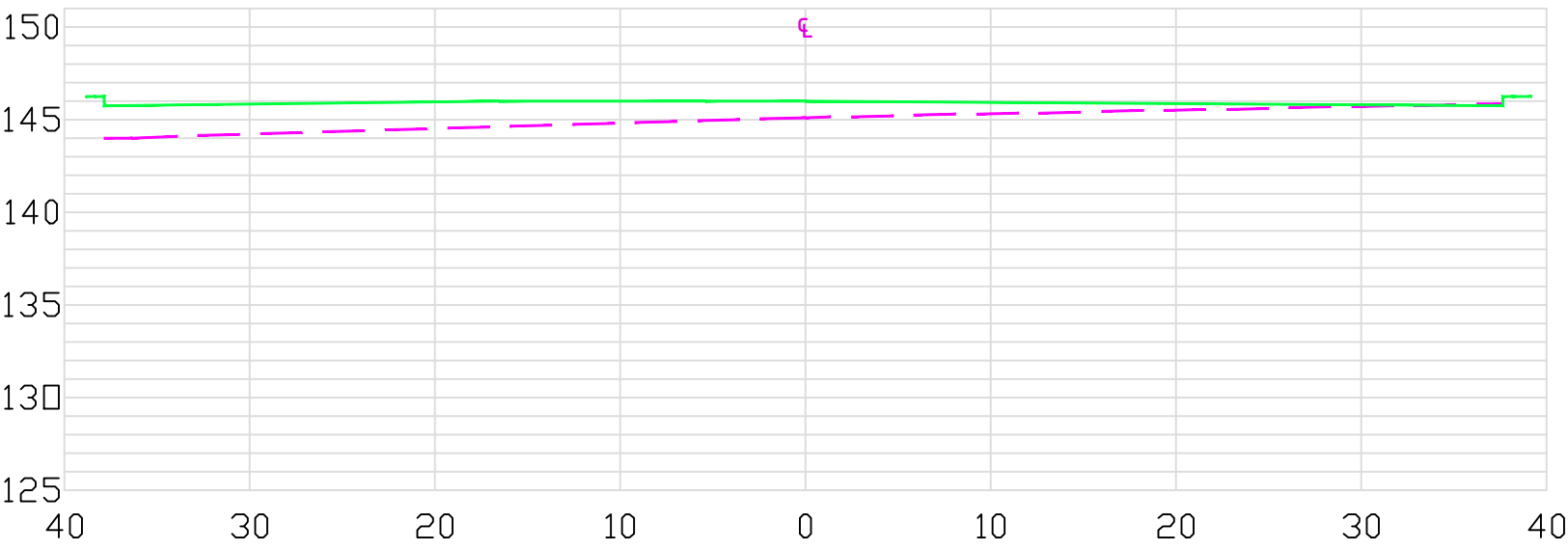
No.	Revision/Issue	Date
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Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

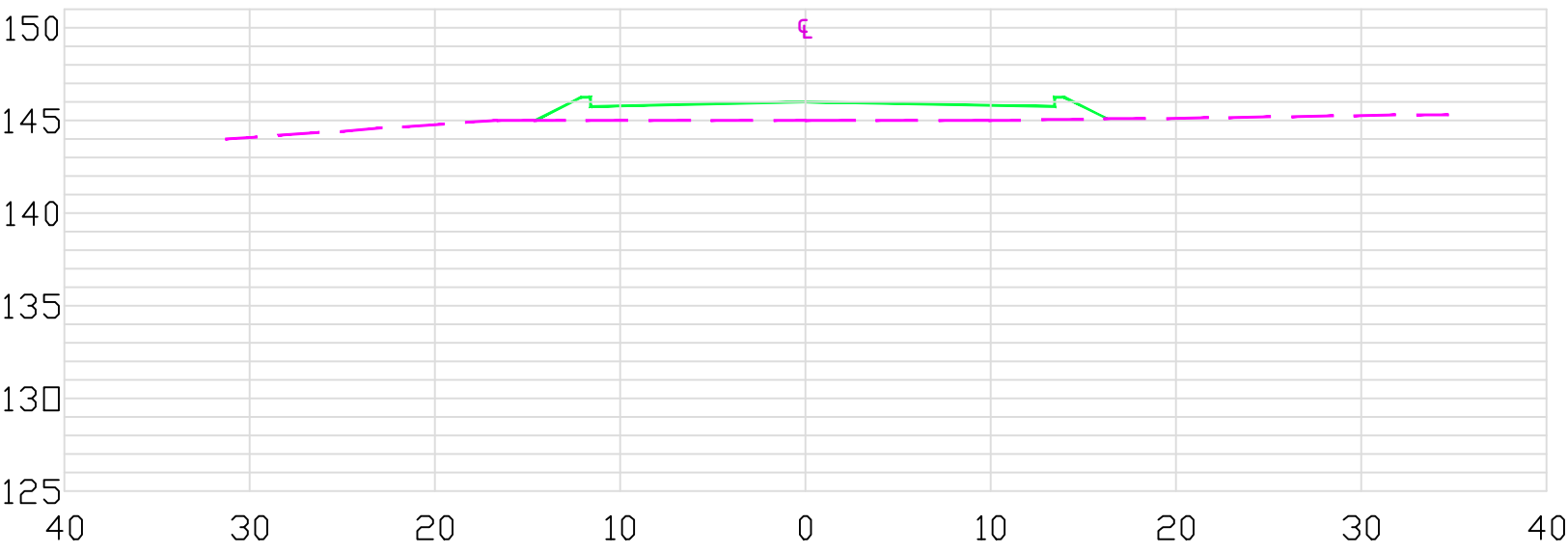
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SECTIONS
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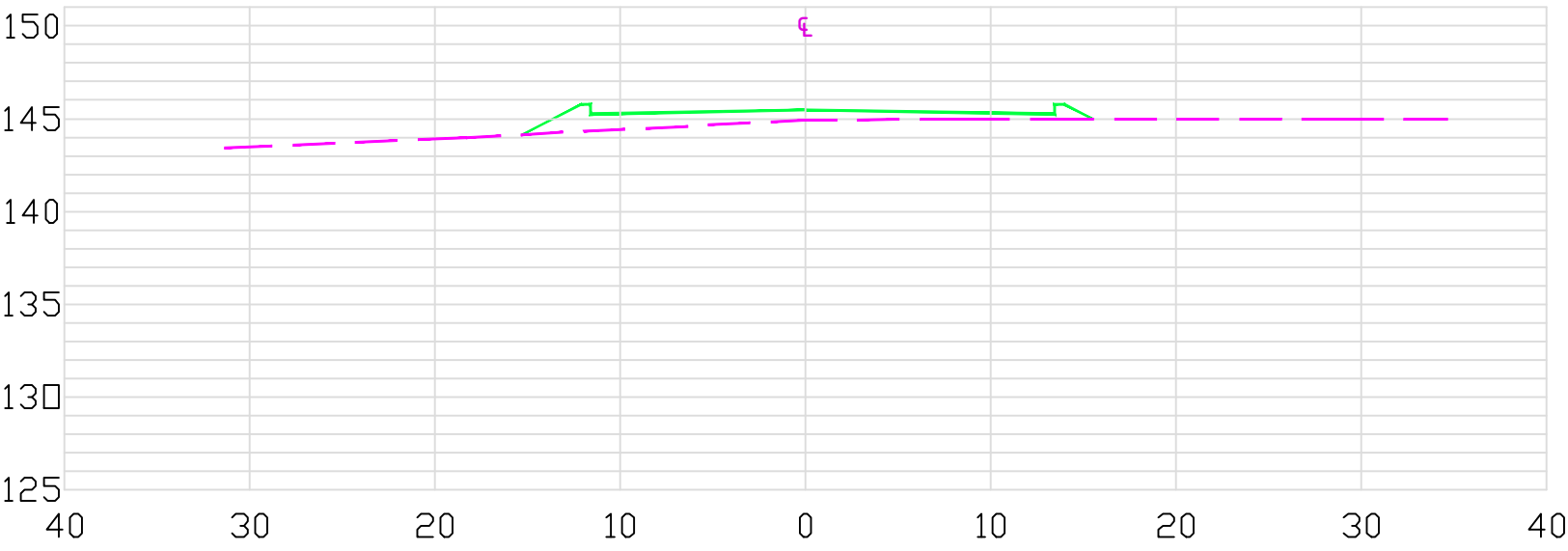
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Date 10/30/25	
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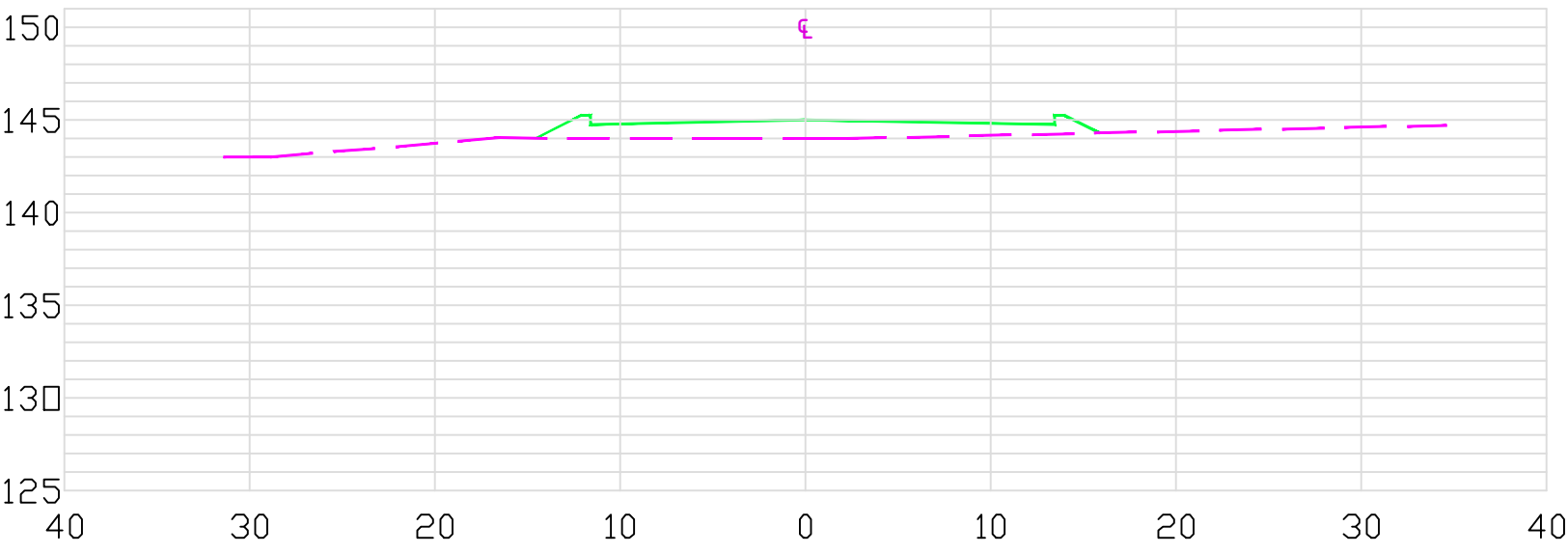
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PROP. CL ELEV 147.0



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EXIST. CL ELEV 145.0
PROP. CL ELEV 147.0



SECTION AT TURN AROUND STA 11+22 62.5' LT
EXIST. CL ELEV 144.8
PROP. CL ELEV 147.5



SECTION AT TURN AROUND STA 11+22 87.5' LT
EXIST. CL ELEV 144.0
PROP. CL ELEV 148.0

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Record Owner and Address

CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address

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TURN AROUND SECTIONS
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.17
Date 10/30/25	
Scale 1"=10'	

A. GENERAL

1. THE CONTRACTOR SHALL REQUEST A COPY OF ALL PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. CONDITIONS IN ALL PERMITS SHALL BE A PART OF THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL NOTIFY DIG-SAFE AND LOCAL UTILITIES A MINIMUM OF 72 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
4. WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 7 AM AND 5 PM MONDAY-SATURDAY UNLESS APPROVED BY THE OWNER.
5. THE CONTRACTOR SHALL NOTIFY A REPRESENTATIVE OF THE CITY 7 DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. THE CONTRACTOR SHALL MAKE HIMSELF AWARE OF THE RIGHT-OF-WAY LIMITS AND PROPERTY BOUNDARIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY LOCAL EMERGENCY SERVICES OF SCHEDULED CONSTRUCTION AT LEAST 7 DAYS IN ADVANCE AND COORDINATE ACCESS FOR EMERGENCY VEHICLES AS REQUIRED.
8. THE CONTRACTOR SHALL BECOME FAMILIAR AND PERFORM ALL WORK IN CONFORMANCE WITH THE CONSTRUCTION STANDARDS IN CFR 29, PART 1926 SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION MOST RECENT EDITION.
9. SUITABLE TEMPORARY STATIONING, OFFSETS AND ELEVATION BENCH MARKS SHALL BE PRESERVED.
10. THE CONTRACTOR SHALL MAINTAIN THE EXISTING SURVEY CONTROLS.
11. THE CONTRACTOR SHALL NOTIFY ABUTTING PROPERTY OWNERS OF ANY DISRUPTION IN ACCESS TO DRIVEWAYS AT LEAST 24 HOURS IN ADVANCE.
12. ACCESS TO DRIVEWAYS SHALL BE RESTORED AT THE END OF EACH WORK DAY.
13. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN SANITARY FACILITIES INCLUDING TEMPORARY TOILETS, WASH FACILITIES, AND DRINKING WATER SUITABLE FOR THE NUMBER OF EMPLOYEES ON THE WORK SITE.
14. THE CONTRACTOR SHALL PROVIDE FIELD OFFICES, STORAGE TRAILERS, AND OTHER SUPPORT FACILITIES AS REQUIRED FOR CONSTRUCTION.
15. THE CONTRACTOR SHALL COLLECT WASTE DAILY AND WHEN CONTAINERS ARE FULL, LEGALLY DISPOSE OF WASTE OFF-SITE.
16. THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES, WARNING SIGNS, AND LIGHTS TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM CONSTRUCTION HAZARDS.
17. DEMOLITION AND CLEARING DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH STATE OF MAINE SOLID WASTE RULES.
18. THE CONTRACTOR SHALL COORDINATE DEMOLITION, UTILITY WORK AND EARTHWORK DURING CONSTRUCTION.

B. WORK ZONE TRAFFIC CONTROL:

1. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL.
2. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN.
3. TEMPORARY TRAFFIC CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION.

C. EROSION CONTROL:

MATERIALS:

1. GRASS SEED MIXTURE SHALL CONSIST OF:

SEED	RATE	PURITY	GERMINATION
KENTUCKY BLUE GRASS	0.46 LBS/1000 SQ. FT	90%	80%
CREeping RED FESCUE	0.46 LBS/1000 SQ. FT	90%	80%
PERENNIAL RYEGRASS	0.11 LBS/1000 SQ. FT	99%	90%

2. WEED SEED SHALL NOT EXCEED 0.5% OF THE TOTAL MIXTURE AND SEED SHALL CONTAIN NO NOXIOUS WEED SEED.

3. MULCH SHALL CONSIST OF: HAY AND STRAW WHICH ARE FREE OF WEED SEEDS, SHREDDED CORN STALKS, WOOD CHIPS, BARK OR SHAVINGS, SAWDUST, WOOD EXCELSIOR AND WOOD FIBER.

4. FILTER FABRIC SHALL BE INSTALLED UNDER ALL RIPRAP AND UNDER STONE FOR LEVEL SPREADERS. THIS FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUIVALENT.

5. STONE FOR RIPRAP:

A. RIPRAP FOR DITCH STABILIZATION, SLOPE STABILIZATION AND PIPE INLET/OUTLET PROTECTION SHALL CONSIST OF ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING.

B. RIPRAP SHALL BE A WELL GRADED MIXTURE DOWN TO THE 1 INCH PARTICLE SIZE. FIFTY PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE. THE DIAMETER OF THE LARGEST STONE IN THE MIXTURE SHALL BE 1.5X D50 SIZE.

INSTALLATION:

1. TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROLS SHALL CONFORM TO THE MDEP MAINE SEDIMENT AND EROSION CONTROL BMP'S," 2016 EDITION.
 2. TEMPORARY EROSION CONTROLS SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE.
 3. THE CONTRACTOR SHALL PREVENT ANY BUILD-UP OF DIRT OR GRAVEL ON PAVED AREAS.
 4. DUST CONTROL MEASURES SHALL BE STRICTLY MAINTAINED DURING CONSTRUCTION.
 5. DUST CONTROL MEASURES SHALL INCLUDE: MOISTENING THE SOIL SURFACE PERIODICALLY WITH ADEQUATE AMOUNTS OF WATER.
 6. LIQUID OR FLAKE CALCIUM CHLORIDE OR AN APPROVED EQUIVALENT SHALL BE APPLIED TO DISTURBED SOIL TO MAINTAIN A MOIST SURFACE.
- APPLICATION RATES:
- | | | | |
|--------|----------------------|--------------------------------|--------------|
| FLAKE | 1.0 -1.5 LB/ SQ. YD | 77% - 80% CONC., | 100 LB. BAGS |
| LIQUID | 0.2 -0.3 GAL/ SQ. YD | 32%, 35%, 38% LIQ. CONCENTRATE | |
7. PRIOR TO APPLYING GRASS SEED AND TEMPORARY STRAW MULCH, FERTILIZER OF A CONSISTENCY OF 10-20-20 SHALL BE APPLIED AT A RATE OF 18.4 LBS/1000 SQ. FT. AND GROUND LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/ 1000 SQ. FT.
 8. AREAS SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.
 9. MULCH MUST BE SPREAD WITHIN 3 CALENDAR DAYS FOLLOWING ANY SOIL DISTURBANCE AND PRIOR TO ANY STORM EVENT WITHIN 100' OF STREAMS, WETLANDS AND IN LAKE WATERSHEDS.
 10. MULCH SHALL BE APPLIED WITHIN 7 DAYS OF SOIL DISTURBANCE IN ALL OTHER AREAS.
 11. MULCHES MUST BE INSPECTED WEEKLY AND AFTER EACH STORM EVENT

- TO CHECK FOR RILL EROSION.
12. IF LESS THAN 90 PERCENT OF THE SOIL SURFACE IS COVERED WITH MULCH, ADDITIONAL MULCH SHALL BE APPLIED IMMEDIATELY.
- APPLICATION RATES FOR HAY OR STRAW MULCH:
- | | |
|---------------------|---------------------------------|
| APRIL 15 -SEPT. 15: | 70 LB -90 LB PER 1000 SQ. FT. |
| SEPT 15 -APRIL 15: | 140 LB -180 LB PER 1000 SQ. FT. |
13. SILT FENCE OR A FILTER BERM SHALL BE INSTALLED DOWN GRADIENT OF DISTURBED SOIL WITHIN THE LIMITS OF CONSTRUCTION.
 14. CURLEX I BLANKETS SHALL BE INSTALLED IN ROAD DITCHES WHERE SLOPES ARE LESS THAN 5 PERCENT AND ON OTHER FILL SLOPES OR BACK SLOPES STEEPER THAN 3:1.
 15. THE MINIMUM THICKNESS OF THE RIPRAP LAYER FOR CHANNEL STABILIZATION SHALL BE 2.25X THE D50 SIZE.
 16. RIPRAP FOR PIPE OUTLET PROTECTION SHALL FOLLOW THE OUTLET PROTECTION DETAIL.
 17. RIPRAP IN CHANNELS SHALL EXTEND ACROSS THE BOTTOM AND UP BOTH SIDES OF THE CHANNEL TO A HEIGHT EQUAL TO THE MAXIMUM DEPTH OF FLOW.
 18. RIPRAP SHALL BE PLACED SO THAT IT PRODUCES A DENSE WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS.
 19. RIPRAP SHOULD BE PLACED TO ITS FULL THICKNESS IN ONE OPERATION.
 20. THE FINISHED SLOPE SHALL BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES.
 21. SILT FENCE AND OTHER TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL ONLY BE REMOVED WHEN VEGETATION IS 90 PERCENT ESTABLISHED.

D. DRAINAGE

1. PIPE FOR CULVERTS SHALL BE ADS N-12 ST 1B PIPE OR APPROVED EQUIVALENT INSTALLED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE CULVERT DIAMETER SHALL BE 12 INCHES UNLESS NOTED OTHERWISE.
3. THE TRENCH BOTTOM SHALL PROVIDE UNIFORM PIPE SUPPORT. IT SHALL NOT CONTAIN BEDROCK, SOFT MUCK OR REFUSE.
4. INSULATION UNDER CULVERTS WHERE REQUIRED SHALL BE DOW STYROFOAM HIGHLOAD 60 EXTRUDED POLYSTYRENE INSULATION.
5. TRENCHES SHALL BE EXCAVATED IN ACCORDANCE WITH THE FOLLOWING TABLE.

PIPE DIAMETER	TRENCH WIDTH
≤10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"

6. PIPES SHALL BE JOINED USING BELL AND SPIGOT JOINTS.
7. THE JOINTS SHALL HAVE SOIL TIGHT GASKETS.
8. THE BELL AND SPIGOT SHALL BE ADEQUATELY "HOMED" FOR A TIGHT JOINING SEAL.

E. EARTHWORK

MATERIALS:

1. GRADATIONS AND CERTIFICATIONS FOR ALL MATERIALS SHALL BE SUBMITTED TO THE OWNER PRIOR TO USE ON THE PROJECT.
 2. LOAM SHALL BE SCREENED, LOOSE, FRIABLE AND SHALL BE FREE FROM SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, RHIZOMES OR OTHER UNDESIRABLE FOREIGN MATTER.
 3. LOAM pH RANGE: 5.5% - 8%
 4. LOAM ORGANIC CONTENT SHALL BE DETERMINED BY IGNITION TEST
- | ORGANIC CONTENT | PERCENT BY VOLUME |
|-----------------|-------------------|
| HUMUS | 10 - 20 |
- | MINERAL CONTENT | PERCENT BY VOLUME |
|-----------------|-------------------|
| SAND | 45 - 75 |
| SILT | 20 - 40 |
| CLAY | 5 - 15 |
5. LOAM SHALL CONTAIN SOLUBLE SALTS AT AN AMOUNT NOT TO EXCEED 500 PPM.
 6. STONE FOR UNDERDRAIN AND STABILIZED CONSTRUCTION EXIT SHALL CONSIST OF HARD, DURABLE ROCK AND SHALL CONFORM TO THE FOLLOWING TABLE:

SIEVE SIZE	PERCENT BY WEIGHT PASSING
1 ½ INCH	3/4 INCH
2 INCHES	100
1 1/2 INCHES	95 - 100
3/4 INCH	0 - 40
1/2 INCH	0 - 20
3/8 INCH	0 - 8
NO. 4	0 - 5
NO. 200	0 - 2

7. GRAVEL SUBBASE SHALL BE SAND OR GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETATIVE MATTER, LUMPS OR BALLS OF CLAY AND OTHER DELETERIOUS SUBSTANCES.
8. MDOT 703.06 TYPE D AGGREGATE SUBBASE GRADATION:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
¼ INCH	25 - 70
NO. 40	0 - 30
NO. 200	0 - 7

9. MDOT 703.06 AGGREGATE BASE GRADATION:
- AGGREGATE FOR BASE SHALL BE CRUSHED GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETATIVE MATTER, LUMPS OR BALLS OF CLAY AND OTHER DELETERIOUS SUBSTANCES. THE GRADATION OF THE PART THAT PASSES THE 2 INCH SIEVE SHALL MEET THE FOLLOWING GRADING REQUIREMENTS:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
-------------------	---------------------------

1/2 INCH	45 - 70
¾ INCH	30 - 55
NO. 40	0 - 20
NO. 200	0 - 5

10. SURFACE GRAVEL SHALL MEET THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
2 INCH	95 - 100
1/2 INCH	30 - 65
NO. 200	7 - 12

11. MDOT 703.20 GRAVEL BORROW SHALL CONSIST OF UNIFORMLY GRADED GRANULAR MATERIAL HAVING NO ROCKS WITH A MAXIMUM DIMENSION OF OVER 6 INCHES AND THAT PORTION PASSING A 3 INCH SQUARE MESH SIEVE SHALL CONTAIN NOT MORE THAN 70 PERCENT PASSING THE ¾ INCH SIEVE AND NOT MORE THAN 10 PERCENT PASSING THE NO. 200 SIEVE.

12. BACKFILL FOR PIPES SHALL CONSIST OF GRANULAR MATERIAL FREE FROM ORGANIC MATTER AND SHALL CONFORM TO THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES
1INCH	95 -100
1/2 INCH	75 -100
NO. 4	50 -100
NO. 20	15 - 80
NO. 50	0 - 15
NO. 200	0 - 5

F. WATER SUPPLY LINE

PIPING

1. CLASS 52 DUCTILE IRON PIPE
2. CTS POLYETHYLENE TUBING
3. COPPER TUBE SIZE POLYETHYLENE SHALL HAVE A WORKING PRESSURE OF 200 P.S.I. AND SHALL CONFORM TO AWWA C-901. ASTM-D-1248 AND ASTM-D-2737. INSERT STIFFENERS ARE REQUIRED FOR ALL FLEXIBLE PLASTIC CONNECTIONS.

FITTINGS

1. CLASS 52 DUCTILE IRON FITTINGS

SERVICE BOXES

1. COVER: PLUG TYPE WITH DEEP SLOT AND BRASS PENTAGON PLUG WITH COARSE "ROPE"THREAD

CORPORATION STOPS AND CURB STOPS

1. SERVICE BRASS MUST CONFORM TO AWWA STANDARD C-800 (LATEST REVISION) AND PACK JOINT END CONNECTIONS SHALL CONSIST OF A BUNA-N BEVELED GASKET FOR WATERTIGHT SEAL. AN INDEPENDENT, SPLIT-CLAMP LICKING DEVICE OR STAINLESS STEEL BEVELED GRIPPER SHALL BE INCORPORATED IN THE DESIGN FOR ADDITIONAL RESTRAINT.

INSTALLATION

1. THE PIPE SHALL BE INSTALLED TO THE LINE AND GRADE IN THE CONSTRUCTION DRAWINGS.
2. ALL PIPES SHALL HAVE METALLIC TAPE LAID 2 FEET ABOVE THE PIPE.
3. THE WIDTH OF THE TRENCHES AT ANY POINT BELOW THE TOP OF THE PIPE SHALL NOT BE GREATER THAN THREE TIMES THE OUTSIDE DIAMETER OF THE PIPE TO PERMIT SATISFACTORY JOINTING AND THOROUGH TAMPING OF THE BEDDING MATERIAL UNDER AND AROUND THE PIPE
4. ROCK IN EITHER LEDGE OR BOULDER FORMATION SHALL BE REPLACED WITH SUITABLE MATERIALS TO PROVIDE A COMPACTED EARTH CUSHION HAVING A THICKNESS BETWEEN UN-REMOVED ROCK AND THE PIPE OF AT LEAST 6 INCHES OR ½ INCH FOR EACH FOOT OF FILL OVER THE TOP OF THE PIPE, WHICHEVER IS GREATER THAN THREE-FOURTHS THE NOMINAL DIAMETER OF THE PIPE.
5. WHERE WET OR OTHERWISE UNSTABLE SOIL INCAPABLE OF PROPERLY SUPPORTING THE PIPE, AS DETERMINED BY THE ENGINEER, IS UNEXPECTEDLY ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH MATERIAL SHALL BE REMOVED TO THE DEPTH REQUIRED AND REPLACED TO THE PROPER GRADE WITH SELECT GRANULAR MATERIAL AND COMPACTED AS REQUIRED.
6. BACKFILL SHALL FOLLOW PIPE ASSEMBLY AS CLOSELY AS POSSIBLE. ANY LOOSE STONES WHICH HAVE FALLEN INTO THE TRENCH SHALL REMOVE BEFORE BACKFILLING BEGINS. THE HAUNCHING SHALL BE INSTALLED AND COMPACTED IN 4 INCH LAYERS. A CUSHION OF APPROVED FILL UP TO 12 INCHES THICK SHALL BE PLACED IN 8 INCH LIFTS AND COMPACTED WITH MECHANICAL TAMPERS OR RAMMERS TO 95% MAXIMUM DRY DENSITY ASTM D698 OVER THE PIPE AND BETWEEN THE TRENCH WALLS.

FLUSHING

1. THE PIPE SHALL BE THOROUGHLY FLUSHED PRIOR TO THE PRESSURE TEST.
2. VALVES SHALL BE PARTIALLY OPENED AND CLOSED SEVERAL TIMES UNDER EXPECTED LINE PRESSURE. THE FLOW VELOCITIES SHALL BE ADEQUATE TO FLUSH FOREIGN MATERIAL OUT OF THE VALVES.

WATERLINE PRESSURE TEST

1. THE PRESSURE TEST SHALL BE PERFORMED ACCORDING TO AWWA C600-93.
2. A PRESSURE TEST SHALL BE PERFORMED ON THE SERVICE LATERAL.
3. THIS TEST SHALL BE AT A PRESSURE OF 80 PSI OR 150% OF OPERATING PRESSURE WHICHEVER IS GREATER FOR A PERIOD OF 2 HOURS. THERE SHALL BE NO EVIDENCE OF LEAKS AND THE PRESSURE SHALL NOT VARY BY MORE THAN 5 PSI FOR THE DURATION OF THE TEST. ALL JOINTS SHALL BE KEPT OPEN FOR VIEWING DURING THIS PERIOD.

WATERLINE DISINFECTION

1. THE WATERLINE SHALL BE DISINFECTED ACCORDING TO AWWA C651-92.

G. SANITARY SEWER

PIPING MATERIALS

1. PIPE FOR GRAVITY SEWERS SHALL CONFORM TO ASTM D3034 FOR SDR35 PIPE.
2. PIPE FOR THE BUILDING SEWER SHALL BE PVC CONFORMING TO ASTM D2665 FOR SCHEDULE 40 PIPING. JOINTS SHALL BE WATERTIGHT.

HANDLING

1. PLACE BUNDLES OF PIPE ON LEVEL GROUND.
2. USE CAUTION TO ENSURE BUNDLES DO NOT IMPACT ANYTHING AND THAT PIPE IS NOT DROPPED OR DAMAGED.
3. STORE PIPE IN BUNDLES.
4. AVOID COMPRESSION, DEFORMATION OR DAMAGE TO THE BELL ENDS OF THE PIPE.
5. STORE FITTINGS AND LUBRICANT IN SEALED CONTAINERS AWAY FROM DIRT OR FOREIGN MATERIAL.

INSTALLATION

1. LOWER PIPE AND FITTINGS CAREFULLY INTO TRENCHES. USE CAUTION TO AVOID IMPACT DAMAGE.
2. AVOID EXPOSURE TO EXCESS HEAT.
3. PLACE PIPE WITH BELL ENDS IN THE DIRECTION OF THE WORK PROGRESS. INSTALL BELLS IN THE UPSTREAM DIRECTION.
4. INSTALL PIPE TO THE ALIGNMENT AND GRADE ESTABLISHED BY THE DESIGN ENGINEER.
5. CLEAN-OUTS SHALL BE INSTALLED AT 100 FOOT INTERVALS OR AS SHOWN ON THE PLANS.
6. USE TRENCH BOXES WHENEVER REQUIRED TO PROTECT WORKERS FROM POSSIBLE CAVE-INS.
7. CONSTRUCT THE TRENCH BOTTOM TO PROVIDE A FIRM, STABLE AND UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE. THE TRENCH BOTTOM SHALL BE FREE OF LARGE STONES, ROCKS, BOULDERS, CONSTRUCTION DEBRIS OR FROZEN MATERIAL.
8. PIPE BEDDING SHALL CONSIST OF GRANULAR SOIL INCLUDING COARSE SAND OR CRUSHED STONE.
9. WHEN AN UNSTABLE SUBGRADE CONDITION IS ENCOUNTERED, ADDITIONAL TRENCH DEPTH SHALL BE EXCAVATED AND REFILLED AND COMPACTED WITH SUITABLE FOUNDATION MATERIAL.
10. EMBEDMENT MATERIALS SHALL BE FREE OF STONES, FROZEN LUMPS AND DEBRIS.
11. A MINIMUM OF 6 INCHES OF SOIL CUSHION SHALL BE PROVIDED ON ALL SIZED OF THE PIPE IF LEDGE IS ENCOUNTERED.
12. ALL PIPES SHALL HAVE METALLIC TAPE LAID 2 FEET ABOVE THE PIPE. PIPE ASSEMBLY
13. CLEAN THE GASKET, THE BELL INTERIOR AND THE SPIGOT AREA WITH A CLOTH TO REMOVE DIRT OR FOREIGN MATERIAL.
14. INSPECT GASKET TO ENSURE IT IS INSTALLED CORRECTLY.
15. APPLY LUBRICANT TO THE BELL END ONLY. USE ONLY LUBRICANT SUPPLIED WITH THE PIPE.
16. ALIGN THE SPIGOT AND BELL AND INSERT THE SPIGOT INTO THE BELL UNTIL IT CONTACTS THE GASKET UNIFORMLY.
17. FIELD CUT PIPE AND CHAMFER THE END ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

FITTINGS

1. CUT THE PIPE SQUARE TO THE REQUIRED LENGTH AND BEVEL THE END PRIOR TO THE INSTALLATION OF FITTINGS.
2. LUBRICATE THE GASKET TO APPROXIMATELY A 1 MM THICKNESS PRIOR TO INSTALLATION.

MANHOLE CONNECTIONS

1. CONNECT TO MANHOLES USING A GASKETED OUTLET SIZED FOR THE PIPE SIZE AND TYPE.

H. ASPHALT:

ROADWAY/ PARKING LOT PAVING

1. AN APPROVED RELEASE AGENT IS REQUIRED ON TOOLS AND EQUIPMENT USED. THE USE OF PETROLEUM BASED FUEL OILS OR ASPHALT STRIPPING SOLVENTS WILL NOT BE PERMITTED.
2. THE ENGINEER WILL ACCEPT OR REJECT ANY HMA BASED ON A VISUAL BASIS, EITHER PRIOR TO PLACEMENT, DURING PLACEMENT OR IN ITS FINAL DISPOSITION. MIXTURES EXCEEDING THE 275°F LOWER LIMIT OR THE 325°F UPPER LIMIT WILL BE REJECTED.
3. ALL HMA MIXTURES SHALL BE SOURCED FROM ONE APPROVED JOB MIX FORMULA, JMF, PER TYPE OF MIX.
4. THE JOB MIX FORMULAS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
5. PLACE BINDER COURSE WHEN THE SURFACE TEMPERATURE IS A MINIMUM OF 40°F AND RISING.
6. PLACE ASPHALT SURFACE COURSE WHEN THE SURFACE TEMPERATURE IS A MINIMUM OF 60°F AND RISING.
7. ROLLING SHALL START AS SOON AS THE HMA CAN BE COMPACTED WITHOUT DISPLACEMENT. ROLLING SHALL CONTINUE UNTIL THE HMA IS THOROUGHLY COMPACTED TO 92 -95 PERCENT AVERAGE DENSITY AND ALL ROLLER MARKS HAVE DISAPPEARED.
8. THE SURFACE OF THE COMPLETED WORK, WHEN TESTED WITH A 10 FOOT STRAIGHTEDGE, SHALL NOT CONTAIN IRREGULARITIES IN EXCESS OF 1/4 INCH.
9. A TACK COAT SHALL BE APPLIED BETWEEN LIFTS OF ASPHALT AT A RATE OF 0.05 -0.15 GAL/SQ. YD.
10. CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS.
11. CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS.

General Notes

PERMIT DRAWINGS
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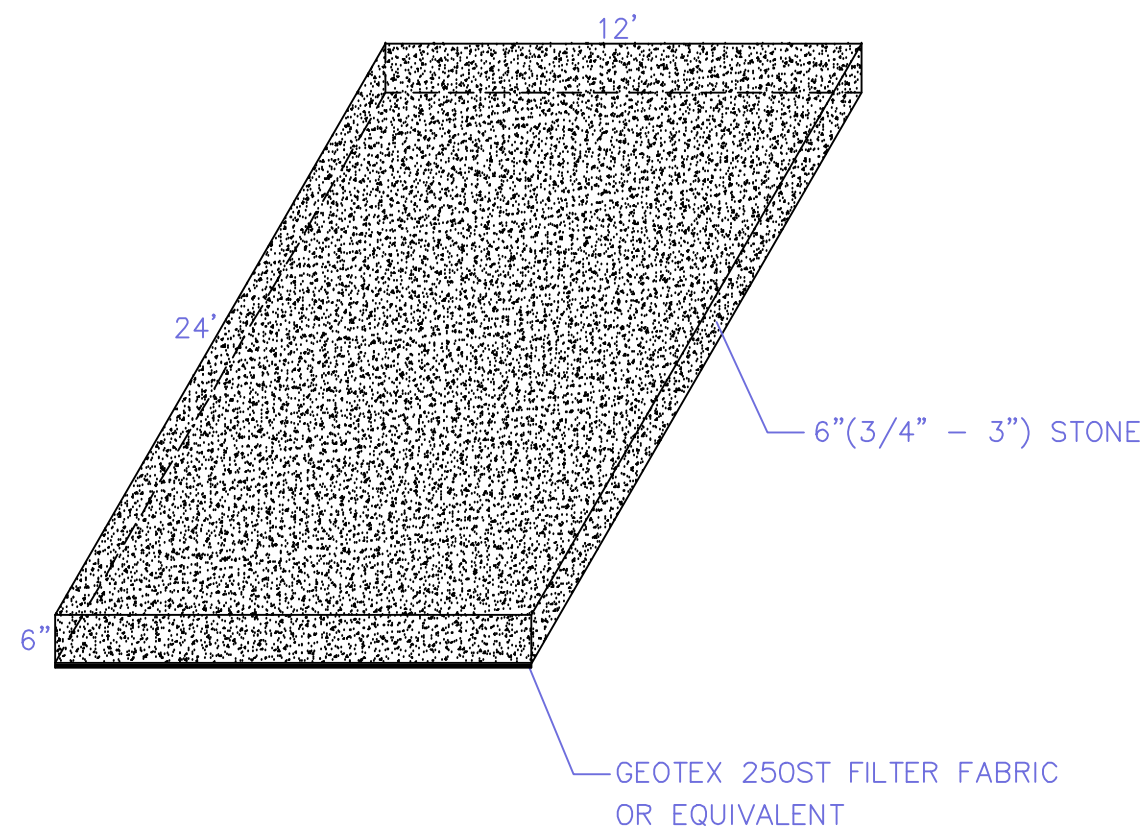
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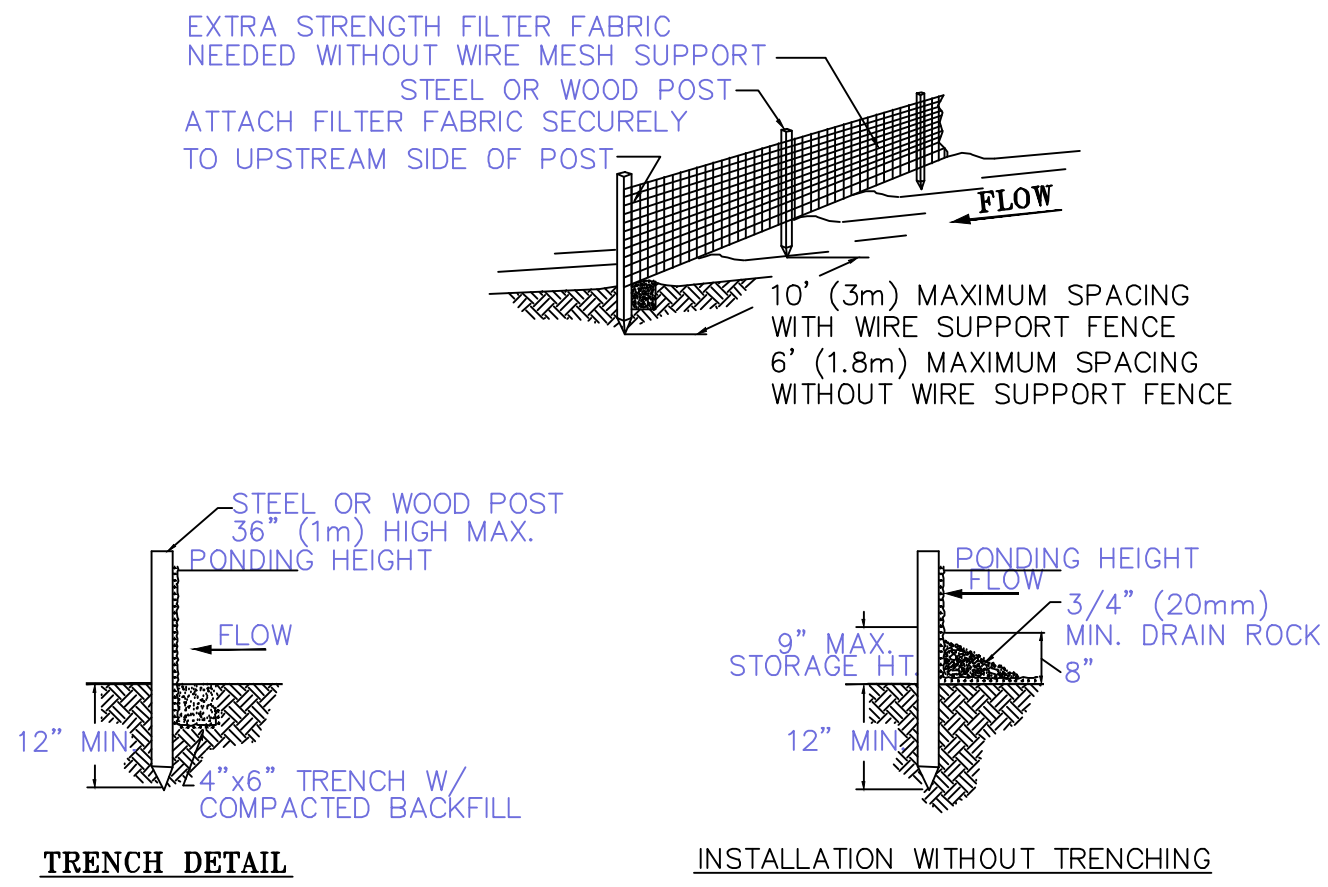
Project Name and Address
CONSTRUCTION NOTES
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet
Date 10/30/25	C-1.18
Scale —	

STABILIZED
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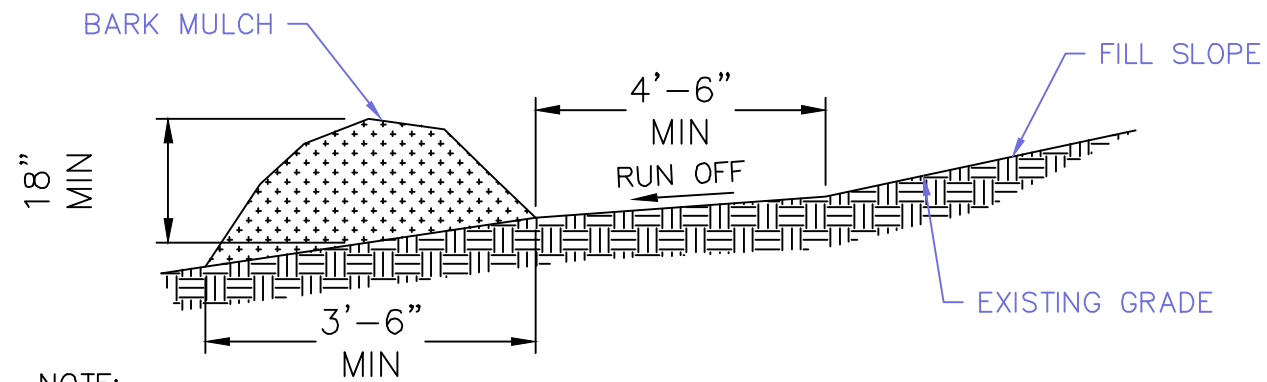


SILT FENCE



- NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
 2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
 3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE
AND CAN BE PERMANENTLY STABILIZED.
- © 1994 JOHN McCULLAH

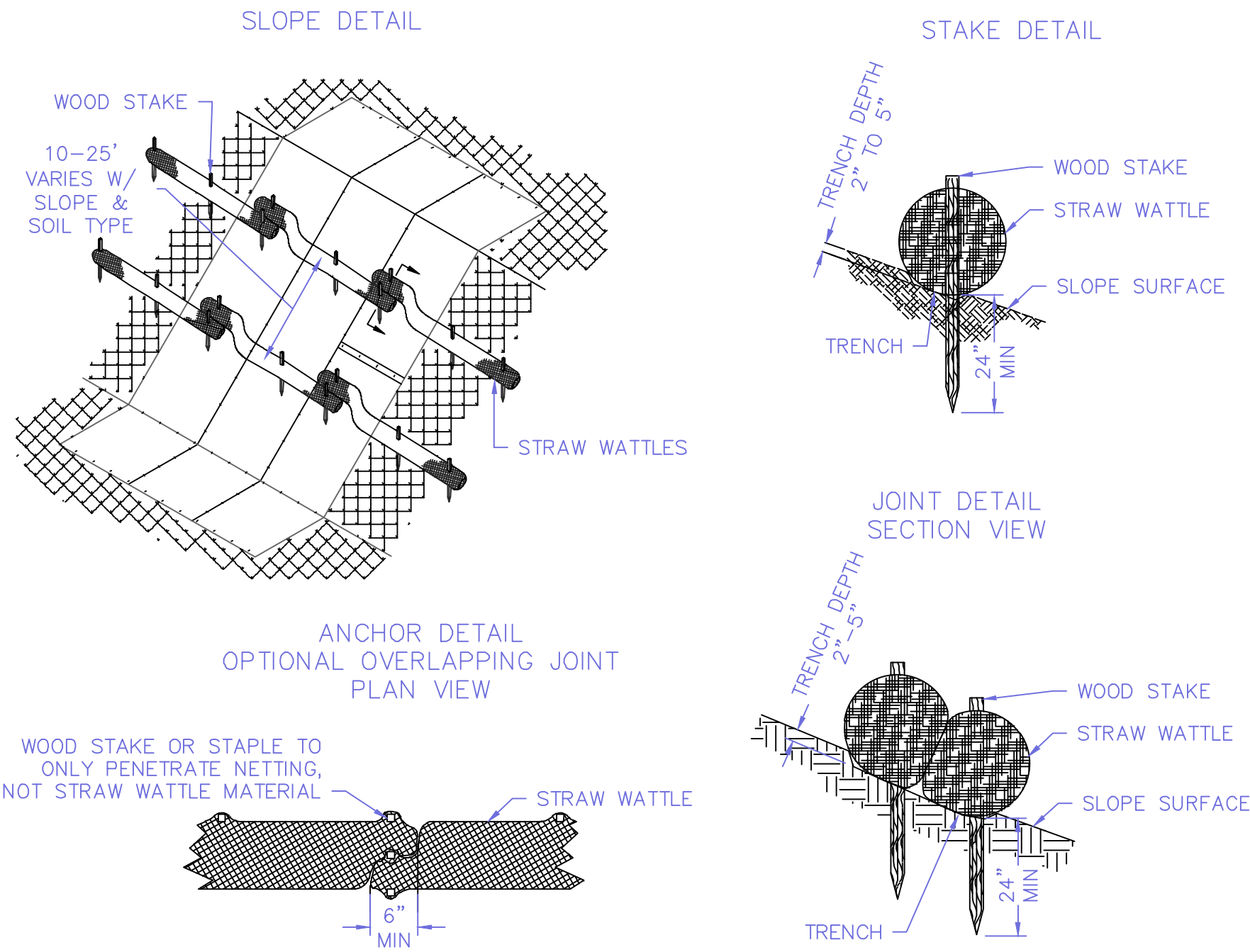
BARK MULCH FILTER BERM



NOTE:
BARK MULCH FILTER BERMS MAY BE USED IN COMBINATION WITH SILT FENCE TO IMPROVE SEDIMENT REMOVAL AND PREVENT CLOGGING OF THE BARK MULCH BERM BY LARGER SEDIMENT PARTICLES. (SILT FENCE PLACED TO FILTER RUNOFF BEFORE BARK MULCH.)

NOT TO SCALE

STRAW WATTLES
N.T.S.



- NOTES:
1. SPACING
 - 1:1 SLOPES — 10 FEET APART
 - 2:1 SLOPES — 20 FEET APART
 - 3:1 SLOPES — 30 FEET APART
 - 4:1 SLOPES — 40 FEET APART
 2. ADJUSTMENTS TO BE MADE FOR THE SOIL TYPE. IF THE SOIL IS SOFT AND LOAMY, ROWS SHOULD BE PLACED CLOSER TOGETHER. FOR HARD, ROCKY SOILS, ADJUST THE ROWS FURTHER APART.
 3. TRENCHING
 - USE A HAND TOOL SUCH AS A MADDOX OR PICK TO SCORE THE GROUND. THEN USE A SHOVEL TO DIG THE TRENCH TO THE REQUIRED DEPTH. SOIL FROM THE EXCAVATION CAN BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
 - TRENCH DEPTH:
 - 3-5 INCHES FOR SOFT SOIL
 - 2-3 INCHES FOR HARD SOIL
 4. STAKING
 - 25 FOOT WATTLES — USE 6 STAKES
 - 20 FOOT WATTLES — USE 5 STAKES
 - 12 FOOT WATTLES — USE 4 STAKES
 - DRIVE STAKES THROUGH THE MIDDLE OF EACH WATTLE, LEAVING 2-3 INCHES OF STAKE PROTRUDING ABOVE THE WATTLE TO PREVENT HEAVY LOADS OF SEDIMENT FROM PICKING THE WATTLE UP AND OFF OF THE STAKES.

General Notes

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EROSION CONTROL DETAILS
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

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Date 10/30/25	
Scale AS NOTED	

Diagram illustrating the cross-section of a pavement structure with the following layers (from top to bottom):

- 1 1/4" 9.5 MM HMA
- 2 1/4" 12.5 MM HMA
- 3" MDOT TYPE A AGGREGATE BASE
- 18" MDOT TYPE D AGGREGATE BASE

The diagram illustrates a cross-section of a proposed 12-foot wide road. The road consists of two 6-foot travel lanes separated by a centerline, with 5-foot sidewalks on both sides. The total width is 12 feet (6' + 6'). The road is bordered by 4-inch loam and seed on the outer edges. The pavement structure includes a 2-inch 9.5 mm HMA surface layer, a 6-inch MDOT Type A aggregate base, and a 18-inch MDOT Type D aggregate base. A USF curb inlet drain is located on the left side of the road. The road is flanked by vertical CIP concrete curbs. The diagram also shows a 1' - 6" wide area on the right side of the road, which is part of the 6-foot travel lane. The road is labeled with dimensions and material specifications.

Labels and dimensions in the diagram include:

- 4" LOAM & SEED
- 5' SIDEWALK
- 1' - 6"
- 11' TRAVEL WAY
- 11' TRAVEL WAY
- 1' - 6"
- VERTICAL CIP CONCRETE CURB
- 4" LOAM & SEED
- USF CURB INLET DRAIN
- 2" 9.5 MM HMA
- 6" MDOT TYPE A AGGREGATE BASE
- 1 1/4" 9.5 MM HMA
- 2 1/4" 12.5 MM HMA
- 3" MDOT TYPE A AGGREGATE BASE
- 18" MDOT TYPE D AGGREGATE BASE
- 1/4" / FT
- 1/4" / FT
- 1/4" / FT

A cross-sectional diagram of a concrete base. The base consists of a 12" MDOT Type A Aggregate Base at the bottom, followed by a layer of Cast in Place Concrete. On top of the concrete is a layer of Domes, Typ., which are supported by a Cast Iron Plate. The plate is 4" thick. The diagram is labeled SECTION A.

DOMES, TYP.

CAST IRON PLATE

4" TYP.

CAST IN PLACE CONCRETE

12" MDOT TYPE A AGGREGATE BASE

SECTION A

A cross-sectional diagram of a pedestrian ramp. The ramp is labeled "PEDESTRIAN RAMP" and "MAX. SLOPE 8.33%". It features a "CAST IRON PLATE" with a "DOME" pattern. The ramp is bordered by a "GUTTER LINE" on the left and a "FINISH SIDEWALK SURFACE" on the right. The base of the ramp is labeled "MDOT TYPE A AGGREGATE BASE". A "DETECTABLE WARNING WELL CONCRETE" area is shown at the transition to the sidewalk. The "FINISH ROAD SURFACE" is indicated at the base of the ramp.

THE TOP DIAMETER OF THE TRUNCATED DOMES SHALL BE 50% TO 65% OF THE BASE DIAMETER

1.6"–2.4"

24"

6"–10" TO CURB FLOW LINE

CURB FLOW LINE

* SHALL BE EQUAL IN BOTH DIRECTIONS

PLAN VIEW

General Notes

No.	Revision/Issue	Date

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Diagram illustrating the layout of crosswalk lines:

- SPACE BETWEEN CROSSWALK LINES SHALL BE EQUAL, 12" MIN. AND 15" MAX.
- 2' WIDE X 6' LONG PAINTED CROSSWALK LINES, TYP.
- EDGE OF CROSSWALK LINE SHALL BE AT FACE OF CURB, TYP.

PROPOSED 5' WIDE
PAVED SIDEWALK

SLOPE CURB
SECTION

DETECTABLE WARNING
SURFACE. SEE DETAIL
THIS SHEET.

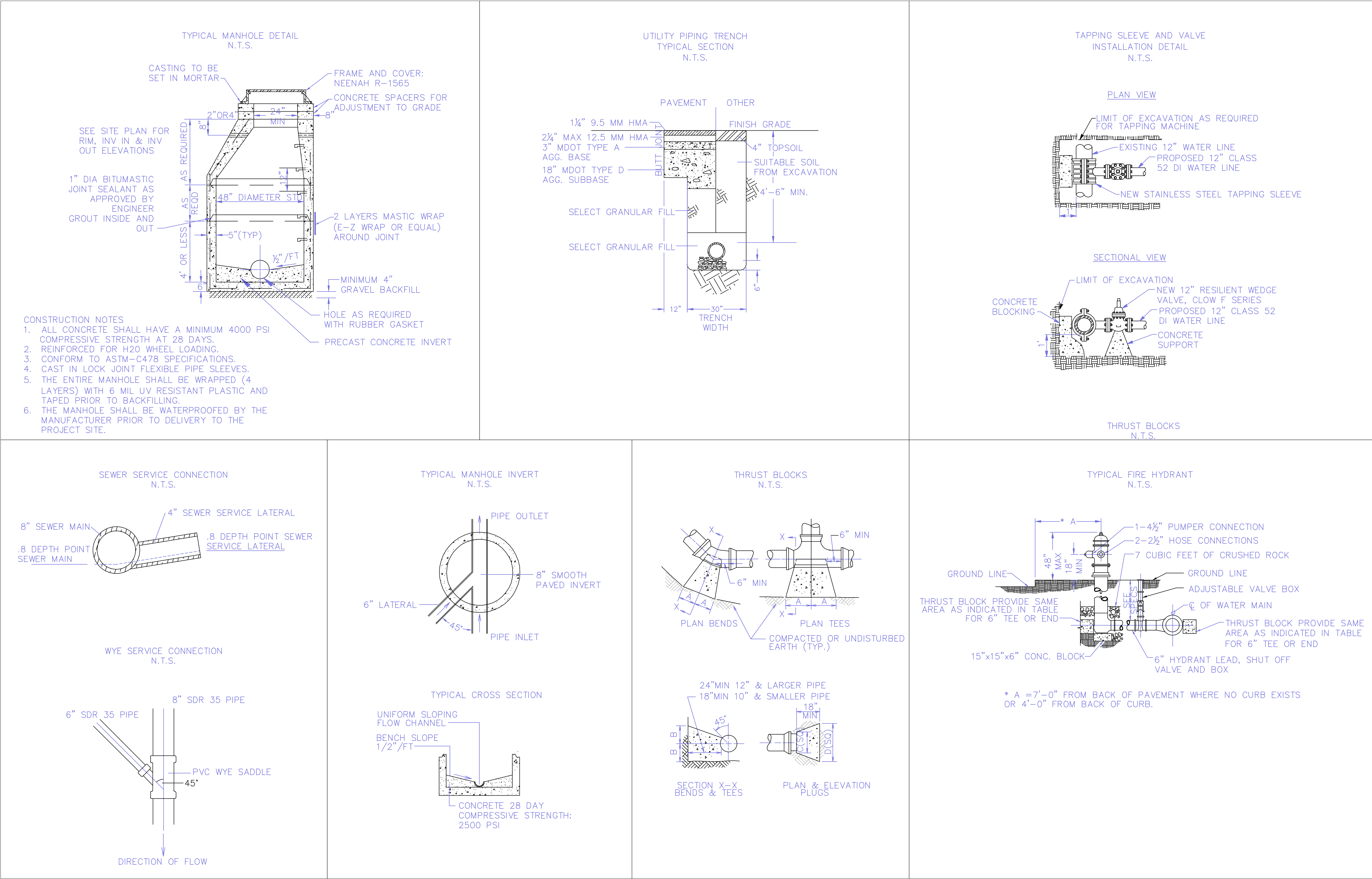
4'

6" - 10"

Slope

SEE SITE PLAN
FOR CONDITIONS
BEYOND LANDING

NOTE: SEE SITE PLAN FOR SIDEWALK LAYOUT CONDITIONS



General Notes		
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No.	Revision/Issue	Date
Record Owner and Address CITY OF ELLSWORTH 1 CITY HALL PLAZA ELLSWORTH, ME 04605		
Firm Name and Address Andrew McCullough Engineering Consultants 93 Bucksport Road Ellsworth, ME 207-667-6551 mccengr@gmail.com		
Project Name and Address UTILITY CONSTRUCTION DETAILS MERRILL LANE EXTENSION Prepared For: CITY OF ELLSWORTH 1 City Hall Plaza Ellsworth, Maine		
Project 6508	Sheet	
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Scale AS NOTED		

VEGETATED UNDERDRAIN SOIL FILTER SPECIFICATIONS:

PART 1: GENERAL

CONSTRUCTION OF THE FILTER SHALL CONFORM TO THE STANDARDS IN STORMWATER MANAGEMENT FOR MAINE, VOLUME III: BMP'S TECHNICAL DESIGN MANUAL, CHAPTER 7 FILTRATION BMPs.

PART 2: PRODUCTS

UNDERDRAIN PIPE: PIPE SHALL CONFORM TO ASTM D 3034 WITH DIMENSION RATION SDR 35. RUBBER GASKETS SHALL CONFORM TO ASTM D3212 AND F477. STANDARD LAYING LENGTHS SHALL BE 13 FT. THE PIPE SHALL BE COLORED GREEN TO IDENTIFY IT. PERFORATIONS SHALL BE 1/2" DIA. HOLES, 5" ON CENTER, 2 ROWS 120 DEGREES APART. DIAMETER 4" INCHES.

OUTLET PIPE: PIPE SHALL CONFORM TO THE STANDARDS LISTED FOR UNDERDRAIN PIPE SPECIFIED ABOVE EXCEPT WITHOUT PERFORATIONS.

PIPE BEDDING

UNDERDRAIN BEDDING MATERIAL SHALL CONSIST OF CRUSHED STONE MEETING MDOT SPECIFICATION 703.22 UNDERDRAIN TYPE C FOR UNDERDRAIN BACKFILL MATERIAL.

TRANSITION ZONE

WELL GRADED, CLEAN COARSE GRAVEL MEETING MDOT SPECIFICATION 703.22 UNDERDRAIN TYPE B FOR UNDERDRAIN BACKFILL MATERIAL.

SOIL FILTER BED:

SOIL FILTER MEDIA

MATERIAL	MIXTURE BY VOLUME	SPECIFICATION
SAND	50% - 55%	MDOT SPECIFICATION #703.01 FINE AGGREGATE FOR CONCRETE
TOPSOIL	20% - 30%	LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15 - 25% FINES PASSING THE #200 SIEVE
MULCH	20% - 30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE 200 SIEVE

ME DOT SPECIFICATIONS FOR AGGREGATE (MDOT #703.01)

SIEVE SIZE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
3/8"	100
#4	95 - 100
#8	80 - 100
#16	50 - 85
#30	25 - 60
#60	10 - 30
#100	2 - 10
#200	0 - 5

NON-WOVEN FILTER FABRIC: MIRAFI 140N FILTER FABRIC OR APPROVED EQUIVALENT.

SEED MIX: ERNST SEEDS - RETENTION BASIN WILDLIFE MIX ERNMx-127

Mix Composition:
30.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
29.5% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
20.0% Elymus virginicus, Madison-NY Ecotype (Virginia Wildrye, Madison-NY Ecotype)
7.0% Carex lurida, PA Ecotype (Lurid Sedge, PA Ecotype)
7.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)
3.0% Verbena hastata, PA Ecotype (Blue Vervain, PA Ecotype)
1.5% Juncus effusus (Soft Rush)
0.5% Agrostis perennans, Albany Pine Bush-NY Ecotype (Autumn Bentgrass, Albany Pine Bush-NY Ecotype)
0.5% Asclepias incarnata, PA Ecotype (Swamp Milkweed, PA Ecotype)
0.3% Scirpus cyperinus, PA Ecotype (Woolgrass, PA Ecotype)
0.2% Helenium autumnale, PA Ecotype (Common Sneezeweed, PA Ecotype)
0.1% Aster novae-angliae, PA Ecotype (New England Aster, PA Ecotype)
0.1% Aster puniceus, PA Ecotype (Purplestem Aster, PA Ecotype)
0.1% Aster umbellatus, PA Ecotype (Flat Topped White Aster, PA Ecotype)

0.1% Eupatorium perfoliatum, PA Ecotype (Boneset, PA Ecotype)
0.1% Lobelia siphilitica, PA Ecotype (Great Blue Lobelia, PA Ecotype)

PART 3: EXECUTION

THE AREA OF THE SOIL FILTER SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE PLAN.

THE GEOTEXTILE FABRIC SHALL BE PLACED PRIOR TO PLACING THE MATERIALS FOR THE FILTER TO PROVIDE SEPARATION BETWEEN THE NATURAL SOILS AND CONSTRUCTED MEDIA. SEAMS SHALL BE LAPPED A MINIMUM OF 12 INCHES.

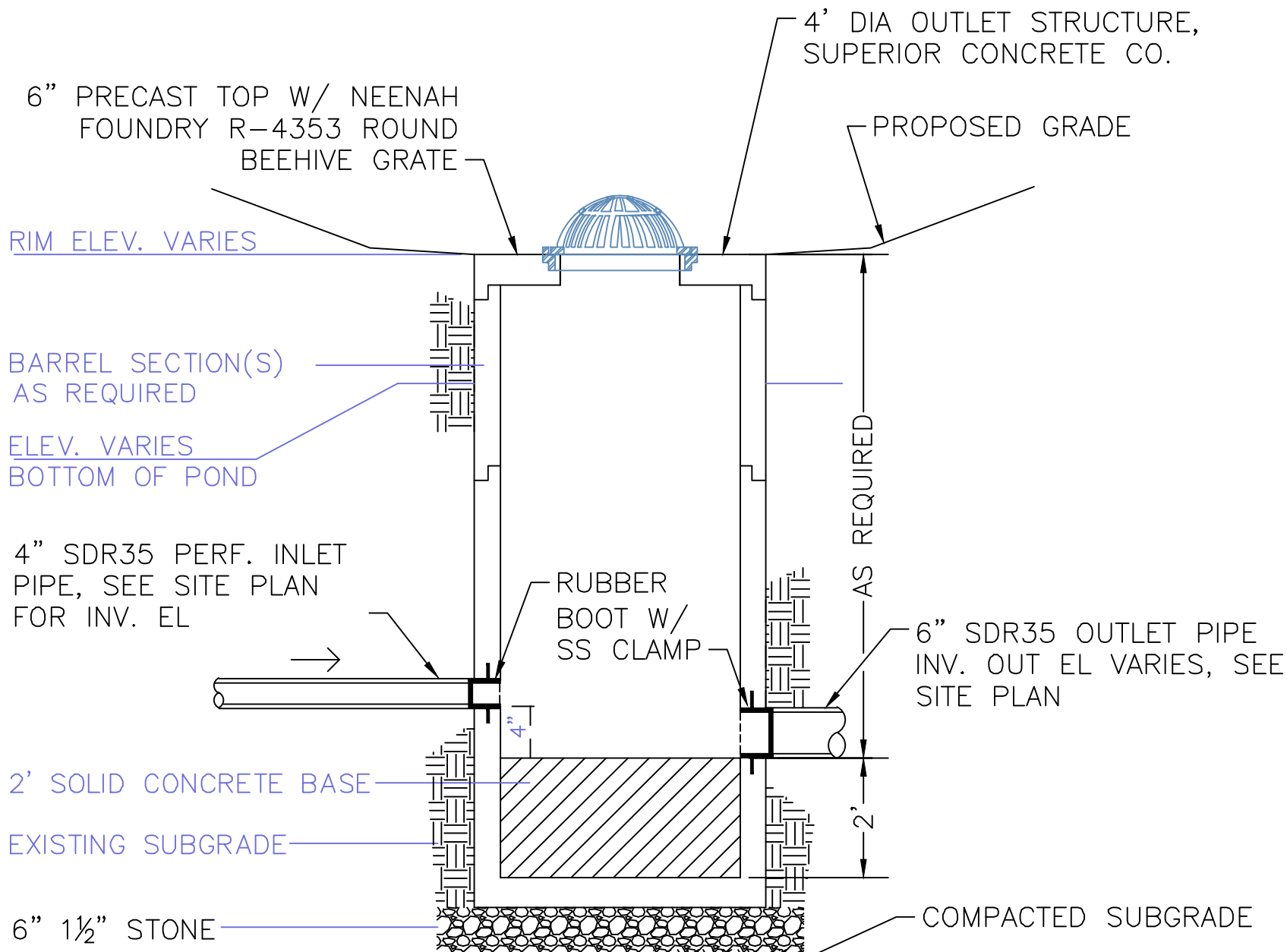
THE UNDERDRAIN BEDDING MATERIAL AND PERFORATED PIPING SHALL BE INSTALLED OVER THE GEOTEXTILE FABRIC. AT LEAST 4 INCHES OF BEDDING MATERIAL SHALL BE PLACED BEFORE INSTALLING THE PIPING. AT LEAST 4 INCHES OF BEDDING MATERIAL SHALL COVER THE PIPING.

THE PERFORATED PIPING SHALL BE INSTALLED AT 4' ON CENTER. THE UNDERDRAIN FILTER PIPE SHALL BE INSTALLED WITH A SLOPE OF 1 PERCENT MINIMUM. A VENT SHALL BE INSTALLED IN THE UNDERDRAIN PIPING SYSTEM.

THE TRANSITION ZONE MATERIAL WITH A MINIMUM THICKNESS OF 6 INCHES. CONSISTING OF MDOT 703.22 UNDERDRAIN TYPE B SHALL BE PLACED TO COVER THE BEDDING MATERIAL.

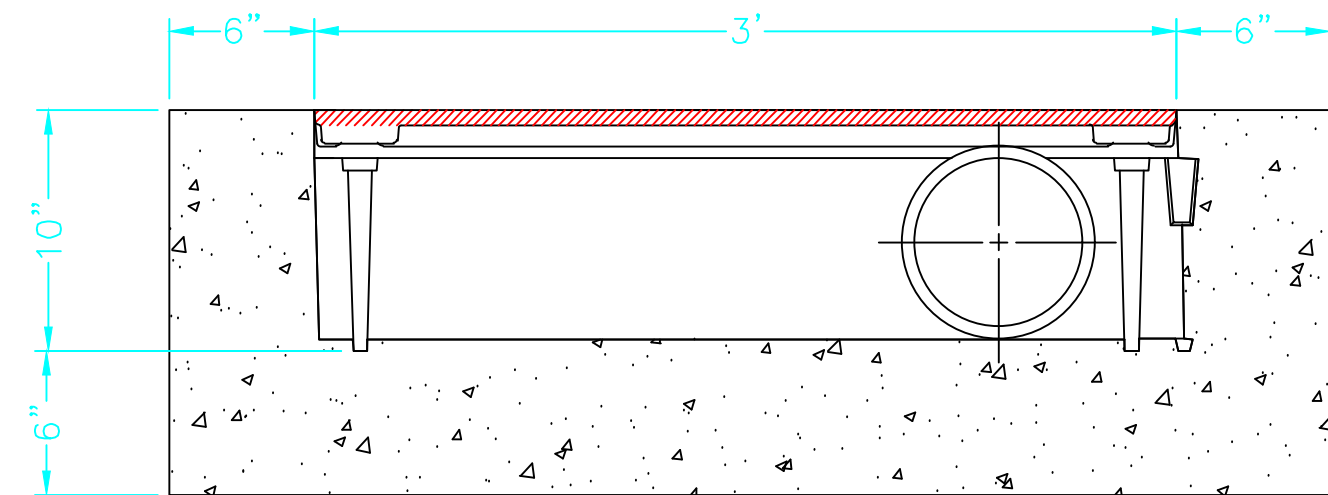
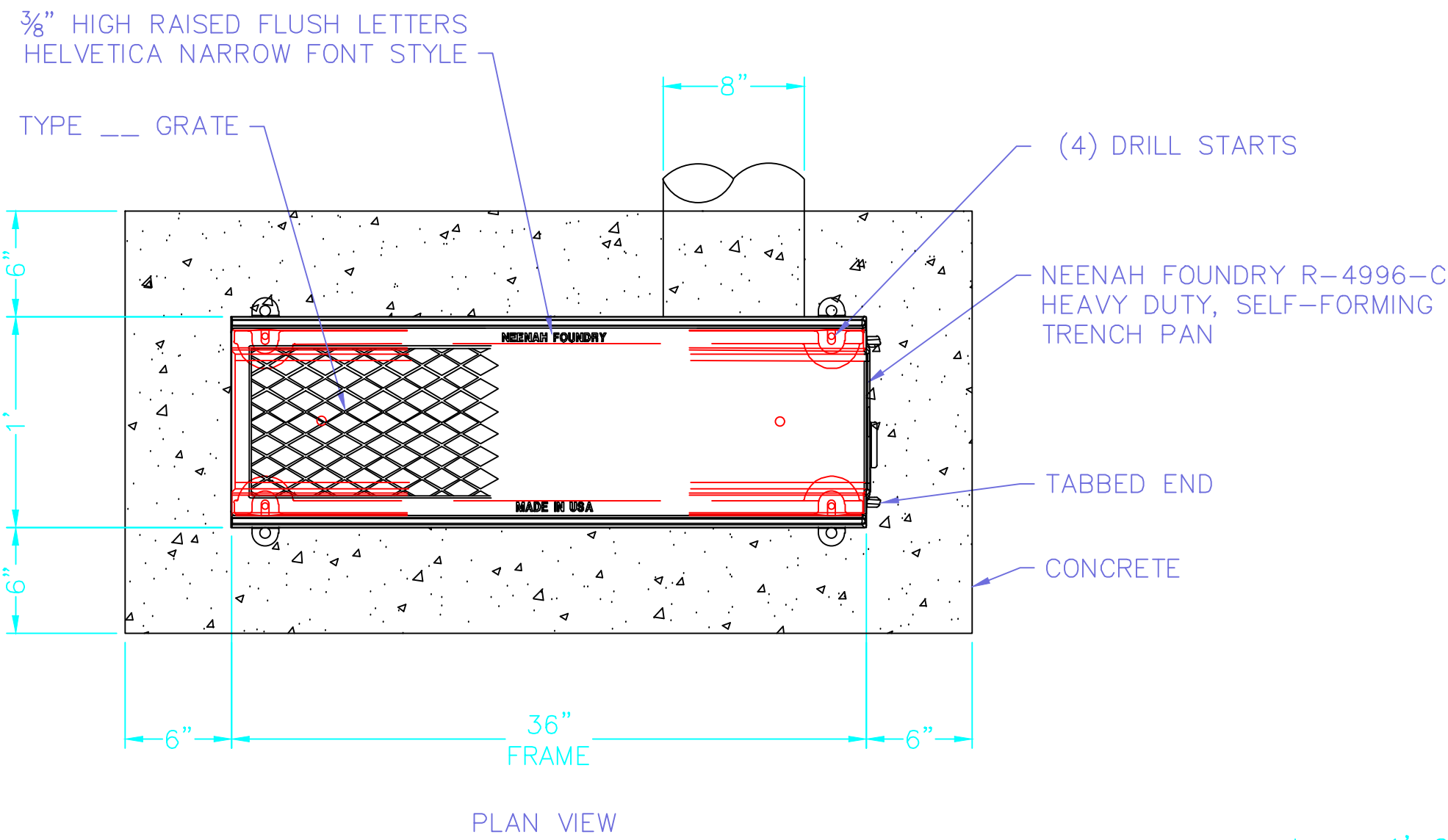
THE SOIL FILTER BED SHALL BE INSTALLED AS THE PRIMARY FILTER MEDIA ABOVE THE TRANSITION ZONE MATERIAL. THE SOIL FILTER BED SHALL HAVE A MINIMUM THICKNESS OF 12 INCHES. IT SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. THE MIXTURE SHALL HAVE MINIMAL CLAY CONTENT AND CONTAIN BETWEEN 5 AND 15 PERCENT FINES PASSING THE #200 SIEVE. CARE SHALL BE TAKEN TO AVOID COMPACTION OF THE GRAVEL AND SOIL FILTER. IT SHALL CONTAIN NO MATERIALS THAT MAY BE HARMFUL TO PLANT GROWTH.

TYPICAL FILTRATION POND OUTLET STRUCTURE

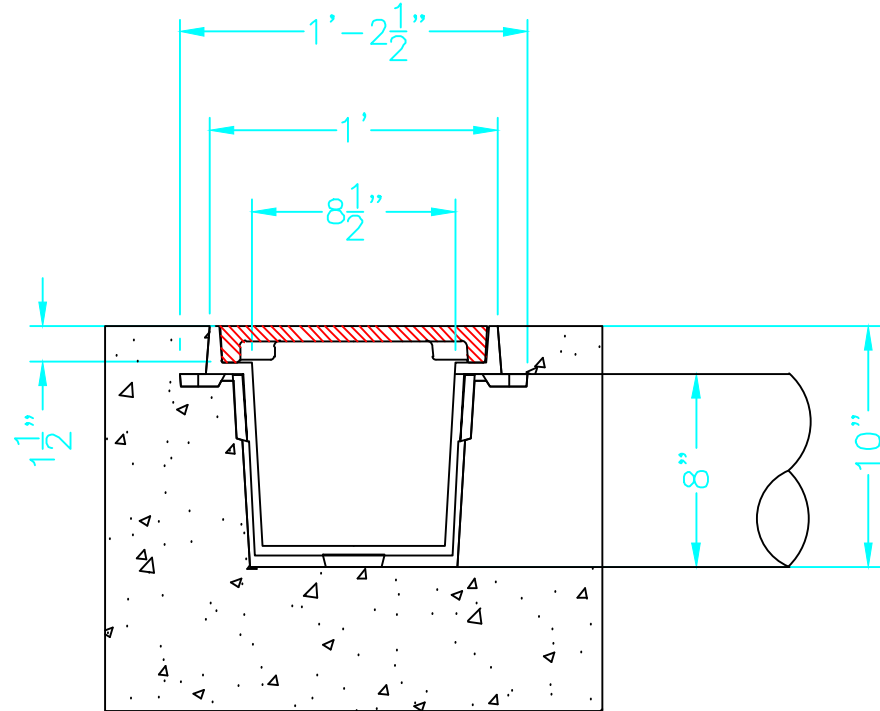


- NOTES:
1. CONCRETE: 4000 PSI MIN. AT 28 DAYS
 2. REINFORCING: 0.18 IN. SQ./LF.
 3. INSTALL ON LEVEL BED OF 6" THICK 1 1/2" STONE
 4. THE INLETS AND OUTLETS SHALL BE EQUIPPED WITH A RUBBER BOOT

USF CURB DRAIN INLET DETAIL
N.T.S.



PROFILE



SECTION

General Notes

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date
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Record Owner and Address
CITY OF ELLSWORTH
1 CITY HALL PLAZA
ELLSWORTH, ME 04605

Firm Name and Address
Andrew McCullough
Engineering Consultants
93 Bucksport Road
Ellsworth, ME
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Project Name and Address
USF CONSTRUCTION DETAILS
MERRILL LANE EXTENSION
Prepared For:
CITY OF ELLSWORTH
1 City Hall Plaza
Ellsworth, Maine

Project 6508	Sheet C-1.22
Date 10/30/25	
Scale AS NOTED	